County Borough of Stoke-on-Trent.

ANNUAL REPORT

OF THE

School Medical Officer

For the Year 1913.

ROBERT HUGHES,

M.B. (Lond.), M.R.C.S., L.R.C.P., M.P.C.,
Fellow (Chairman of the School Medical Service Group) of the Society of Medical Officers of Health.
Member of the Medico-Psychological Association,
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Stoke-on-Trent:
J. G. Fenn Ltd., The City Press.

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To the Chairman and Members of the Stoke-on-Trent Education Committee.

Mr. Chairman, Ladies and Gentlemen,

I beg to submit to your notice my THIRD ANNUAL REPORT of work carried out in the School Medical Department.

Prior to the re-construction of this department in September, 1911, in consequence of the amalgamation of the six Pottery Towns into the one County Borough, the work had been carried out by six different officials working independently of each other, my first report was, therefore, mainly concerned with an attempt to combine the various facts recorded into an uniform system of classification.

My second report, being the first to deal with the work of a whole year since this re-construction took place, a considerable portion of it was devoted to a detailed account of the initial scheme of medical inspection adopted and the relationship, under this scheme, of my department with other departments of the Borough.

In this, my third report, an account is included of the developments which have taken place during the year, others which are contemplated in the near future, and the present position of the Borough with regard to the school hygiene movement generally.

The appointment of a Medical Inspection Sub-Committee, to which monthly reports are submitted, has placed the Local Education Authority far more in touch with details of the work than was possible before ; the present report, therefore, will contain many matters with which you are already familiar. It must be remembered, however, that it is written for the information of the Board of Education, as well as for that of the Local Authority, and much that is superfluous to the former is essential to the latter.

An indication of the extent of the Board's requirements may be gathered from the following extract from Circular 823 issued in August last:—

> "The Board desire, at the same time, to refer to paragraph 10 of Circular 792, with regard to the Annual Reports of School Medical Officers. Local Education Authorities will realise that under the new conditions as to grant, the need for an accurate, clear and full statement of the work of the School Medical Service in each area is increased. . . . . Many of the reports received are found to give the information required by the Board in a clear and comprehensive form. In a large number of cases, however, the requisite information either is not given at all, or is presented with insufficient detail and exactness Further, in the Board's view, the time has now come when these reports should include, as far as practicable, a general discussion and exposition of the facts revealed, in order that, by means of co-operation between School Medical Officers of different Authorities, an adequate review of the work of school hygiene throughout the country may be made possible. A proper understanding of the questions raised by school medical work is only feasible if the School Medical Officers themselves are in a position to deal with the matter in a comprehensive and scientific way, and with due consideration to causes and conditions."

I have the honour to remain,

Your obedient servant,

ROBERT HUGHES,

School Medical Officer.

Town Hall,
Hanley, Stoke-on-Trent,
January, 1914.

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MEMORANDA.

Area of Borough		1,142 acres.
Population (Census 1911)		234,553
Estimated mid-year population, 1913		239,264
Rateable value		£877,606
Total rates	Hanley (highest)	11/3
	Fenton (lowest)	8/1½
Elementary education rate		1/8½
A penny rate produces		£3054 (Assuming single rate area £62.826)
Number of public elementary schools		71
	Accommodation	47,920
	Average number on rolls	46.632
	Average attendance	43,148
Number of non-provided schools		31
	Accommodation	146,96
	Number on rolls	15,541
Number of "half-timers"		None
Average number on rolls of children under five years of age		3,079
Number of secondary schools		3
	Number on Rolls	916
Number of special schools		1
	Number of Stoke children resident	44

ANNUAL REPORT.

The School Hygiene Movement.

Medical Inspection of school children was first made compulsory in this country by the passing of the Education (Administrative Provisions) Act which came into operation on January 1st, 1908. though school doctors had been appointed by individual Local Authorities before that time; for example, London in 1890,(1) Bradford in 1893,(1) and, one is pleased to say, the late County Borough of Hanley in 1904, while the Elementary Education (Blind and Deaf Children) Act, 1893, laid the obligation upon all Local Authorities of providing a special system of education for a certain class of physically defective children; and in 1899. the Elementary Education (Defective and Epileptic Children) Act. although it did not make the practice of ascertaining the existence of mentally defective and epileptic children and the provision of appropriate educational treatment compulsory on all, still it rendered it allowable for individual Authorities to undertake this work with the approval of the Education Department.

Since 1908, the school hygiene movement in this country has been advancing rapidly, until, at the present day it includes medical inspection of the child, following up and supervision of children found defective, treatment of defective children, special schools for physically and mentally defective children, provision of school meals, physical games and exercises, school baths and bathing. supervision of school buildings, the control of infectious disease in schools, medical inspection in secondary schools, the teaching of hygiene to teachers and scholars, employment of children and schools for mothers,(2) and our own country certainly takes the lead with regard to the organisation of its school medical service.

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(1) Annual Report of the Chief Medical Officer of the Board of Education, 1908.

(2) The present position of the School Hygiene movement in England. A Paper read at the Fourth International School Hygiene Congress by Ralph Crowley, M.D., Medical Officer of the Board of Education.—"School Hygiene," November, 1913.

This service consists of a number of school medical officers and assistants, while the Central Authority, the Board of Education, exercises general supervision over the work through its own medical staff. Further, each local school medical officer is required to compile an annual report, copies of which are sent to the Board. The Board's chief medical officer also compiles an annual report based on the information contained in the reports of the local school medical officers and in those of its own officers who periodically inspect the work of the local official, to whom copies of this annual report are sent. By this means a vast amount of valuable information is collected by the Central Authority from throughout the country and is re-distributed among local officers. The Board's function of general supervision is also exercised by the issue of circulars to Local Authorities.(3)

Although by this means the school medical officers of different localities are, indirectly, able to compare notes, it has long been felt that this indirect means is insufficient, and that the formation of a society or association of those engaged in school medical work was essential. There are, at the present time, no less than 1,111(4) medical officers in the service in England and Wales, most of whom were unknown to each other and had practically no facilities for exchange of ideas. It is true that an association, the Association of Medical Officers of Schools has been in existence since 1884, which publishes an excellent journal, "School Hygiene." It was, however, originally founded for the benefit of medical officers of public schools, such as Eton and Harrow, holds its meetings in London and has no provincial branches. Advantage has, therefore, been taken of the existence of an already highly influential and organised body, having branches throughout the country, the Society of Medical Officers of Health, most of whose members are engaged in the work of school hygiene, and a special School Medical Service Group has been organised within it, membership being extended to all engaged in school medical work. The formation of this group cannot fail to be of immense service to medical officers themselves, to Local Authorities and to the school hygiene movement throughout the country.

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(3) Circular 576. Memorandum on Medical Inspection of children in public elementary schools. Circular 582, including a schedule of medical inspection. Circular 596, dealing with the functions of the School Medical Officer, provisions for medical inspection, annual reports and arrangements for attending to the physical condition of school children. Joint memorandum of the Local Government Board and the Board of Education on closure and exclusion from school for infectious disease. Circular 758. Memorandum on the teaching of infant care and management. Circular 779. Memorandum on physical training in secondary schools. Circular 702. Grants for medical treatment. Circular 813. Records of medical inspection of children leaving school. Circular 823. Grants for work connected with the school medical service.

(4) Annual Report, Chief Medical Officer, Board of Education, 1912.

In the organisation of school medical work there are two points on which the Board has laid special stress from the first:—

(1) Arrangements for co-ordinating the work of the school medical service with that of the public health service of each area.

(2) Arrangements for rendering the school medical service an integral part of the system of elementary education in each area.(5)

With regard to (1), full details of local arrangements will be found in my annual report for the year 1912.

With regard to (2), I am glad of this opportunity of expressing my keen appreciation of the interest shown by the school teachers, especially head teachers, in all matters connected with school hygiene, and to thank them for the assistance so constantly afforded to myself and other members of the school medical staff.

With regard to the present position of the Borough with reference to the school hygiene movement generally, it must be remembered that our circumstances are altogether exceptional. The uncertainty as to the future set up by the federation controversy, which continued from the date of the passing of the Education (Administrative Provisions) Act to the time federation became an accomplished fact in May, 1910, rendered it impossible for the late six independent Authorities to undertake any but the most rudimentary developments, and as the school medical department of the new Borough was not constituted until September of the following year, it cannot be expected to have advanced to the same extent as that of its more fortunately situated competitors whose school medical service has been in existence since January, 1908.

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(5) E.G. Circular 823. Regulations as to grants, sec. 4, sub-sec. d. and e.

To this consideration must be added the facts that the school medical department was only one of many which had to be completely reorganised, that the rateable value of the Borough is an exceedingly low one, so that a penny rate only brings in £3.054, although the population numbers over 239,000, and that the number of children attending the Public Elementary Schools is larger in proportion to the general population than is the case in any other town of the same size, save one.(6)

Taking these facts into consideration, I think that the present report will show that the rate of advance has been fully as great as is consistent with prudence. Sir George Newman writes:—(7) "Undue haste in attempting at once to alleviate the defects and diseases which are met with is not unnatural, and springs, in many cases, from true humanitarian instincts and sympathies. Nevertheless, it is to be deprecated as likely to create difficulties of its own, leading in all probability to the early embarassment of the Authority."

Among the developments of the past year, the formation of a Sub-Committee to deal with school medical matters must rank as one of special importance. The School Attendance and Canteen Sub-Committee undertook this duty, and has since been known as the School Attendance and Medical Inspection Sub-

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(6)

	Population	Av. Attend.	Percentage
Bradford	288,505	35,109	12.
Hull	278,024	42,991	15.
Leicester	227,242	35,499	11.
Newcastle-upon-Tyne	266,671	41,721	15.
Nottingham	259,942	36,405	14.
Portsmouth	231,165	30,071	13.
Salford	231.380	37,237	16.
West Ham	289,102	54,078	18.
Stoke-on-Trent	234.553	41,043	17.

List includes all towns of population 200,000 to 300,000. Population taken from Census Report, 1911, average attendance from Report of C.M.O. Board of Education, 1911-1912. Percentage represents number attending school per 100 of population.

(7) Annual Report, Chief Medical Officer, Board of Education, 1908.

Committee. The School Medical Officer reports to this Committee monthly, and attends its meetings. The newly constituted Committee held its first meeting on the 14th of June last.

In the advancement of local school hygiene, three bodies are concerned, the school medical staff, the school teachers, and the local committee. Of these, the last is by far the most important, as it is on the members of the Local Education Authority that the responsibility of its administration ultimately rests, and it is therefore of the utmost importance that they should be kept posted up in all matters connected with the work. This I have endeavoured to do by means of monthly reports, by summaries of reports of various societies, and in some instances by procuring and distributing copies of the reports themselves.(8)

The greatest local difficulty has been met to a considerable extent by the award, for the first time, of Government grants; a grant of £208 17s. 9d. was received for work done ancillary to medical treatment in March last, the highest grant the Board was empowered to award, and the Board is now empowered, for the first time, to award a grant up to one-half of the expenditure, not in connection with a part of the work only, but in connection with the whole.

Additional grants are also available in connection with special schools, amounting *e.g.* in the case of open-air day schools, to one-half the cost of educating each child; and in the case of residential open-air schools, to approximately one-third.

This action on the part of the Government has rendered the prospects of the local advance of school hygiene very much brighter.

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(8) "Influence of School Books upon Eyesight." British Association "Report of Medical Inspection Sub-Committee Medico-Psychological Association on Mentally Defective and Epileptic Children." Summaries of "Control of Measles in Schools." "Medical Officers of School Association." "Causes of Myopia in School Children." International Medical Congress, 1913.

Staff.

School Medical Officer.

Robert Hughes, M.B. (Lond.), M.R.C.S., L.R.C.P., M.P.C.

Assistant School Medical Officers.

Catherine Kirk, M.A., M.B., Ch. B., D.P.H. (Edin.)
Rosa Murray, M.B., Ch. B., B.A.O. (R.U.I.)

School Nurses.

Harriett Pitt. Ethel Jones.

Clerk.

A. J. Steele.

All of these are whole time officials.

The following table contains a comparative statement as to the numerical strength of our own staff compared with that of other County Boroughs. For purposes of comparison, all County Boroughs with a school population of 30,000 and under 50,000 are included, the school population of Stoke-on-Trent for the same year (1912) being 41,043.

Table showing Medical Staff and Nurses employed by County Boroughs of a school population of 30,000 and under 50,000.(1)

Locality	Number of Entrants and Leavers inspected	Number of Medical Officers actively engaged		Number of School Nurses employed		Average School Attendance 1911—12
		Whole time	Part time	Whole time	Part time	
Bradford	8,247	8	1	5	—	35,109
Hull	10,118	2	7	4	—	42,701
Leicester	7,709	2	4	2	—	35,499
Newcastle-upon-Tyne	13,661	2	1	2	—	41,721
Nottingham	7,204	2	4	6	—	36,405
Portsmouth	5,147	3	1	4	—	30,071
Salford	8,634	2	—	3	—	37,237
Stoke-on-Trent ...	10,332	3	—	2	—	41,043

(1) Compiled from Statistics contained in the Annual Report of the Chief Medical Officer of the Board of Education, 1912.

Dr. Kirk resigned her position in December last to take up a similar one under the West Riding County Council. In consequence of frequent changes in the personnel of the medical staff, the whole question was considered at a special meeting of the Staffing Sub-Committee, the result being that it was decided to raise the salary of the School Medical Officer to £400, rising by increments of £25 per annum to a maximum of £500, and that of the Assistant School Medical Officers to £300, rising at the same rate to a maximum of £350. The previous salary of the School Medical Officer was £350 per annum, and that of the two Assistant Medical Officers, £250 per annum.

It has since been decided to appoint an additional Clerk, and also an additional School Nurse.

The existing Medical Staff has hitherto been able to cope with the whole of the *statutory* part of the work together with certain other work which, although not absolutely required by the Board of Education is strongly recommended as making all the difference as to whether the scheme of medical inspection adopted is capable of affording a reasonable return for the money expended upon it or not. Additional work in the way of treatment has now been undertaken, making the whole the maximum which can possibly be done by the present staff.

There must always arise a time in the course of evolution of any scheme of medical inspection when further advance involves increase in staff.

On and after April 1st, 1915, the Board of Education requires the inspection of children of an intermediate age group, namely 8-9, and have already notified the fact in order to give Local Authorities plenty of time in which to make the necessary provisions. As this will involve an increase of fifty per cent in the statutory portions of the work alone, both medical and clerical, there can be no question that increase of medical staff will then be essential. Probably the best course, therefore, will be to postpone consideration of the matter until the time comes for the consideration of the estimates for that year.

Medical Inspection of the Child.

Children medically examined during the year may be classified primarily into two groups, routines and specials, the former consisting of entrants or children newly admitted to school, and leavers or children about to leave school, and the latter of the following classes of children :—

(1) Children presented for medical examination by Head Teachers and School Nurses who are thought to be in need of medical attention.

(2) Children presented by the Attendance Officers with regard to their fitness to attend school.

(3) Children thought to be suffering from infectious disease.

(4) Exceptionally dirty, verminous or neglected children.

(5) Mentally retarded and epileptic children.

(6) Exhibitioners and Bursars.

The number of routines examined was 10,815, and the number of specials 2,143, making a total of 12,958.

In addition to these, the School Nurses have been authorised to examine the person and clothing of school children under Section 122 of the Children Act, and have visited every school in the Borough for this purpose. The number examined by them was 19,376.

The following three tables are model tables issued this year for the first time by the Board of Education.

Table I. refers to the number of children inspected, table II. shows the physical condition of children inspected, and table III. is intended for the purpose of giving a numerical return of all exceptional children in the area.

In the absence of any previous model tables, we have hitherto made use of our own summary sheets, and the work of entering results ascertained by medical inspection has been going on during the whole year. Consequently, as the mode of classification adopted in the Board's tables differs in some respects from ours, and as these tables were not published until the end of the year, I have been unable to conform to them with regard to some particulars. Instances in which the two systems differ are, however, clearly indicated.

As stated in my last annual report, considering the urgent need which existed for the appointment of additional School Nurses, the establishment of a School Treatment Clinic and the financial position of the Borough, one hesitated to ask the Local Authority to incur any considerable expense in connection with purely clerical work. Less stress has, therefore, been laid on statistical investigation than is the case in many other localities.

Our existing scheme, for example, does not render it possible to quote figures showing the frequency with which two or more different defects have occurred in the same child, such as enlarged tonsils and heart disease, enlarged glands and carious teeth, adenoids, enlarged tonsils and carious teeth and so forth.

Having regard to the prospective increase of work in the near future, in consequence of the inclusion of children of an intermediate age group among the routines, it is doubtful whether a system can be adopted which will render this possible even now, moreover, one has some misgivings as to the value of statistics compiled in this way.

I propose, therefore, to substitute special inquiries on certain subjects, one such subject to be selected by each of the medical officers. Such special inquiries have always had the cordial support and encouragement of the Board's Chief Medical Officer.(1)

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(1) In his Annual Report for 1910, Sir George Newman writes:—

> "It is of great importance to the advancement of education and the betterment of the physical and mental condition of children in Public Elementary Schools, that each Local Education Authority should not only allow but encourage their School Medical Officer and his assistants to undertake such special inquiries as may be deemed desirable or necessary to the effective and economic working of the Authority's schemes for the benefit of the school children placed by Statute under their charge." The results of many such inquiries are also quoted in this and subsequent reports.

The following is the first of the Board's Model Table.

No. 1.—Table showing the number of children inspected 1st January, 1913, to 31st December, 1913.

A.—"Code" Group.

ENTRANTS.

Age	3	4	5	6	Other Ages	Total
Boys	—	1293	1174	328	113	2908
Girls	—	1392	1301	291	97	3081
Totals ...	—	2685	2475	619	210	5989

LEAVERS.

Age	12	13	14	Other Ages	Total	Grand Total
Boys	2196	214	—	105	2515	5423
Girls	1988	187	—	136	2311	5392
Totals ...	4184	401	—	241	4926	10815

B.—Group other than "Code."

	Intermediate Group (if any)	Special Cases	Re-examinations *i.e.* No. of Children re-examined
Boys	—	898	—
Girls	—	1245	—
Total ...	—	2143	3923

In order to secure plenty of time for the following up of leavers, all children have been examined who are due to leave school on or before July 31st, 1914. This fact accounts for the number included under the heading "other ages."

The next table showing heights and weights does not form part of the model series.

HEIGHT.

	Boys			Girls		
Age last Birthday	No. Examined during 1913	Average height in inches	English Standard *	No. Examined during 1913	Average height in inches	English Standard *
4	1293	33·4	38·7	1392	32·1	38·6
5	1174	34·4	40·6	1301	32·4	40·4
6	328	37·1	42·5	291	40·5	42·4
12	2196	55·0	55·0	1888	56·9	54·6
13	214	57·4	56·1	187	57·9	56·9

WEIGHT.

	Boys			Girls		
Age last Birthday	No. Examined during 1913	Average weight in lbs.	English Standard *	No. Examined during 1913	Average weight in lbs.	English Standard *
4	1293	33·9	35·9	1392	30·2	34·8
5	1174	33·3	38·6	1301	30·0	37·6
6	328	35·6	42·6	291	41·8	40·9
12	2196	76·0	72·8	1888	73·0	73·8
13	214	77·6	77·4	187	73·4	80·0

* Taken from Table IV. Appendix II. of the Annual Report of the Chief Medical Officer of the Board of Education, for the year 1912.

It was found that one or two of the weighing machines were out of order.

The table which follows is the second of the model series.

The number of instances in which parents or persons representing them were present at medical inspection was 5,890 or 54 per cent.

Clothing and Footgear.

There is a fund in Hanley and in Burslem for the provision of boots to necessitous children. Although this is a great boon to poor families, the fact that these boots are seldom, if ever, repaired from the time they are received to the time they are worn out, minimises its value from the school hygiene point of view. In a number of departments a supply of felt slippers is kept which are lent to children with defective footgear to wear in school in times of severe weather. In view of the importance of the matter in connection with the prevention of various forms of heart and lung trouble, the provision of more adequate facilities for drying wet boots and cloaks is a matter for consideration when planning new schools. The ordinary means consisting of cloak-rooms supplied with hot water pipes are insufficient for this purpose as one has reason to know from the result of one's own observations of the condition of outdoor clothing at the end of school time. Nearly all our departments are, however, supplied with at least these ordinary means.

Cleanliness.

In addition to the cases noted in Table II., the School Nurses have examined the person and clothing of 19,376 girls. Of these, the presence of either nits or vermin was found in 6,069 or 31·3 per cent. The children were of all ages and were not specially selected.

Nutrition.

The close approximation of the percentages of this year with those of the previous year, notwithstanding the fact that, with the exception of myself, there has been a complete change of medical staff, makes it appear that the "ocular method" of estimating states of nutrition is more reliable than is commonly supposed.

Table 2.—RETURN SHOWING THE PHYSICAL CONDITION OF CHILDREN INSPECTED.

CONDITION	ENTRANTS				LEAVERS				TOTAL				SPECIAL CASES		
	Boys	Girls	Total	Per Cent.	Boys	Girls	Total	Per Cent.	Boys	Girls	Total	Per Cent.	Boys	Girls	Total
TOTAL INSPECTED	2908	3081	5989	...	2515	2311	4826	...	5423	5392	10815	...	898	1245	2143
CLOTHING—															
Satisfactory	2690	2932	5622	93·9	2226	2089	4315	89·4	4916	5021	9937	91·8	867	1220	2087
Unsatisfactory	218	149	367	6·1	289	222	511	10·6	507	371	878	8·2	31	25	56
FOOTGEAR—															
Satisfactory	2756	2954	5710	95·3	2322	2108	4430	91·8	5078	5162	10130	93·6	898	1244	2142
Unsatisfactory	152	127	279	4·7	193	203	396	8·2	345	330	675	6·3	...	1	1
CLEANLINESS OF HEAD—															
Clean (*i.e.*, no nits or pediculi)	2693	2011	4704	78·6	2377	569	2946	69·0	5070	2580	7650	70·7	873	1037	1910
Nits only (pediculi)	215	1070	1285	21·4	138	1742	1880	31·0	353	2812	3165	29·3	25	208	233
CLEANLINESS OF BODY—															
Clean	2880	2989	5769	96·3	2355	2237	4592	95·1	5235	5226	10461	96·7	885	1224	2109
Dirty (pediculi present)	128	92	220	3·7	160	74	234	4·9	288	166	454	3·3	13	21	34
NUTRITION—															
Excellent	994	896	1890	31·6	544	505	1049	21·7	1438	1401	2839	27·0	5	15	20
Normal	1548	1955	3503	58·5	1520	1448	2968	61·5	3068	3403	6471	59·8	888	1224	2112
Below normal	229	187	416	6·9	378	303	681	14·1	607	490	1097	10·2	5	6	11
Bad	137	43	180	3·0	73	55	128	2·7	210	98	308	3·0	...	...	...
NOSE AND THROAT—															
No defect	2322	2702	5034	84·0	2087	1962	4049	85·1	4409	4574	9083	84·0	851	1155	2016
Mouth breathers	127	63	190	3·2	38	32	70	1·4	165	95	260	2·4	17	13	30
Tonsils slightly enlarged ... ... Tonsils much enlarged	319	223	542	9·0	312	260	572	11·8	631	483	1114	10·3	20	37	57
Adenoids slight ... ... Adenoids marked	39	29	68	1·2	21	21	42	0·9	60	50	110	1·0	16	30	46
Other disease	101	54	155	2·6	57	36	83	1·7	158	90	238	2·2	...	...	...
EXTERNAL EYE DISEASE—															
No disease	2842	3009	5851	97·7	2481	2274	4755	98·5	5323	5283	10606	98·1	786	1059	1845
Blepharitis	37	36	73	1·21	18	16	34	0·73	55	52	107	1·0	17	22	39
Conjunctivitis	8	11	19	0·32	4	8	12	0·25	12	19	31	0·3	65	91	156
Corneal opacities	3	6	9	0·15	2	8	10	0·2	5	14	19	0·15	10	38	48
Other disease	18	19	37	0·62	10	5	15	0·3	28	24	52	0·5	20	35	55
EAR DISEASE—															
No disease	2859	3060	5919	98·8	2485	2289	4774	98·9	5344	5349	10693	98·9	862	1209	2071
Obstruction (one)	6	2	8	0·13	5	2	7	0·13	11	4	15	0·13	2	2	4
,, (both)	1	...	1	0·016	3	1	4	0·1	4	1	5	0·04	4	3	7
Otorrhœa (one)	34	14	48	0·8	14	14	28	0·6	48	28	76	0·7	26	26	52
,, (both)	8	5	13	0·22	8	5	13	0·26	16	10	26	0·2	4	5	9
TEETH—															
Less than four decayed	2484	2923	5407	90·2	2179	2071	4250	88	4663	4994	9657	89·3	876	1223	2099
Four or more decayed	319	82	401	6·7	258	167	425	8·8	577	249	826	7·5	11	4	15
Sepsis	105	76	181	3·1	78	73	151	3·1	183	149	332	3·2	11	8	19
HEART AND CIRCULATION—															
No disease	2807	2981	5778	96·5	2319	2080	4399	91·2	5126	5061	10187	94·2	847	1151	1998
Organic disease	26	25	51	0·9	41	38	79	1·6	67	63	130	1·2	16	41	57
Functional disease...	38	33	69	1·1	105	85	190	3·9	141	118	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Anæmia	39	42	81	1·5	50	108	158	3·2	89	150	239	2·0	17	40	57
LUNGS—															
No disease	2745	2960	5705	95·3	2456	2263	4719	97·9	5201	5225	10426	96·4	820	1153	1973
Chronic Bronchitis and bronchial cath. ...	149	105	254	4·2	34	32	66	1·3	183	137	320	3·0	11	9	20
Tuberculosis	8	5	13	0·2	8	3	11	0·2	16	8	24	0·2	49	43	92
Tuberculosis suspected	6	11	17	0·3	19	11	30	0·6	25	22	47	0·4	28	40	68
NERVOUS SYSTEM—															
Chorea	2	1	3	...	8	2	10	0·2	10	3	13	0·1	14	10	24
No disease	2896	3077	5973	99·7	2500	2307	4807	99·6	5396	5384	10780	99·7	872	1227	2099
Epilepsy (major or minor)	5	2	7	0·1	5	2	7	0·1	10	4	14	0·1	11	6	7
Other disease	5	3	8	0·04	2	...	2	0·04	7	3	10	0·1	1	2	3
SKIN—															
No disease	2844	3016	5860	97·7	2490	2288	4778	99·1	5334	5304	10638	98·3	523	1007	1530
Ringworm (body)	5	12	17	0·3	8	3	11	0·2	13	15	28	0·2	7	29	36
,, (head)	24	14	38	0·6	3	3	6	0·1	27	17	44	0·4	214	121	335
Impetigo, scabies and other diseases ...	45	39	84	1·4	14	17	31	0·6	59	56	115	1·1	154	88	242
RICKETS—															
No disease...	2831	3055	5886	98·3	2442	2279	4721	97·8	5273	5334	10607	98·1	896	1243	2149
Slight ... ... Marked	77	26	103	1·7	73	32	105	2·2	150	58	208	1·9	2	2	4
DEFORMITIES—															
No deformity	2834	3043	5877	98·2	2448	2245	4693	97·2	5282	5288	10570	97·7	881	1234	2115
Deformity present	74	38	112	1·8	67	66	133	2·8	141	104	245	2·2	17	11	28
TUBERCULOSIS (NON-PULMONARY)—															
No disease	2887	3070	5957	99·4	2503	2296	4799	99·4	5390	5366	10756	99·5	882	1222	2104
Glandular	18	11	29	0·5	9	14	23	0·5	27	25	52	4·4	10	13	23
Bones and joints	2	...	2	...	2	1	3	0·06	4	1	5	0·05	1	2	3
Other forms	1	...	1	...	1	...	1	0·02	2	...	2	0·02	5	8	13
SPEECH—															
Not defective	2888	3064	5952	99·4	2482	2292	4774	98·9	5370	5356	10726	99·2	885	1238	2123
Defective articulation	15	16	31	0·5	15	13	28	0·6	30	29	59	0·5	12	3	15
Stammering	5	1	6	0·1	18	6	24	0·5	23	7	30	0·3	1	4	5
MENTAL CONDITION—															
Normal	2872	3053	5925	99·0	2415	2248	4663	96·6	5287	5301	10588	98·0	869	1197	1966
Dull or backward	29	22	51	0·8	97	60	157	3·27	126	82	208	1·8	19	11	30
Mentally defective (all grades)	7	6	13	0·2	3	3	6	0·12	10	9	19	0·16	10	7	17
VISION—															
More than 6/18ths ... ... R	...	...	...	...	2236	1978	4214	87·3	2236	1978	4214	...	821	1038	1859
L	...	...	...	...	2182	1959	4141	85·8	2182	1959	4141	...	800	1040	1840
6/18ths or worse ... ... R	...	...	...	...	279	333	612	12·7	279	333	612	...	77	207	284
L	...	...	...	...	333	352	685	14·2	333	352	685	...	68	205	273
SQUINT—	60	53	113	1·9	16	13	29	1·2	76	66	142	1·1	20	41	61
HEARING (WHISPER)—															
20 feet each ear (normal hearing)—															
5 feet one ear	...	...	...	...	42	35	77	1·6	42	35	77	...	...	5	5
5 feet both ears	...	...	...	...	13	10	23	0·5	13	10	23	...	1	4	5
Less 5 feet one ear	...	...	...	...	53	31	84	1·7	53	31	84	...	...	1	1
Less 5 feet both ears	...	...	...	...	15	5	20	0·4	15	5	20	...	6	5	11

This fact is illustrated by the following table :—

Table showing percentage of children with good and with subnormal nutrition examined during 1913 and the previous year.

State of nutrition	1913	1912
Excellent	27·0	20·4
Normal	59·8	64·4
Below normal ...	10·2	10·6
Bad	3·0	4·6

Various formulæ have been devised for expressing states of nutrition numerically, but as yet no really satisfactory method has been found.(2)

The influence of nutrition on mental fatigue is a question of some importance from the educational point of view.

Although it appears that mental development is influenced more by the number and variety of sensory stimuli transmitted to the cerebral cortex than by food, nutritional states must always be taken into account when examining the mentally retarded.

Although I have not yet been able to extend the inquiry, carried out in 1910 in the late Urban District of Fenton, as to the causes of malnutrition to the whole Borough, some information as to the home conditions of children supplied with school meals will be found in another section.(3)

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(2) The following appears to be the most used :—

$$N = \frac{100\sqrt[3]{\text{weight in kilograms}}}{\text{height in centimetres}}$$

N denotes nutritional index.

A totally different method consists in taking the percentage ratio of the girth of the relaxed arm to the girth of the chest after forced expiration.

(3) Provision of school meals, pages 59—60.

Nose and Throat.

Enlarged tonsils and adenoids are conditions for which existing facilities for securing treatment appear to be inadequate.(4) Up to the present the only adequate form of treatment has been held to consist of their removal by surgical operation. More recently, however, Dr. Steuart has published cases showing successful treatment by means of the x rays,(5) and Dr. Ashby by means of the employment of lymphatic gland extract.(6) It would be as well to wait and see whether either of these methods becomes generally accepted before undertaking the treatment of these conditions at the School Clinic.

Heart and Circulation.

Heart diseases are commonly classified into functional and organic, though it is by no means easy to determine in which class many cases should be placed. According to Dr. Bezley Thorne,(7) many cases of so-called functional heart disease are in reality due to the action of a toxin which is sometimes of rheumatic and sometimes of gastro-intestinal origin, and which affects the myocardium or muscular portions of the heart as well as the muscular coats of the arteries. He further states that this form of heart disease is very liable to occur in subjects bearing evidence of past rickets and is apt to be exaggerated during periods of active growth and development. Most people appear to classify as "functional" any form of heart affection in which there is no evidence of permanent disease of the valves. This is the principle which has guided my colleagues and myself.

The tendency of modern medicine, however, is to lay less stress on the condition of the valves and more on the condition of the myocardium. It is quite obvious that the disturbance caused by a leaky valve, whether in a heart or in an ordinary yard pump, may be overcome by putting more force into the act of pumping, whereas, given as sound valves as one may wish for, the disturbance to the circulation set up by weakened heart muscles may be compared with the disturbance to the flow of water set up by the substitution of a child of five for a well-developed adult to work the yard pump.

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(4) Section—Following up. Page 30.

(5) Steuart. British Medical Journal, March 31st, 1913. "The Treatment of Adenoids and Enlarged Tonsils without Operation."

(6) Ashby. British Medical Journal, March 31st, 1913. "The Cause of Enlarged Tonsils and Adenoids in Children and their Treatment with Lymphatic Gland Extract."

(7) Bezley Thorne. British Medical Journal, March 8th, 1913. "Manifestations of a Healthy Heart."

Unfortunately those diseases which attack the valves tend also to attack the myocardium as well,(8) and in estimating a child's fitness for certain kinds of physical exercises, swimming or employment on leaving school, both must be taken into account, though of the two, the condition of the latter is the more important.

The commonest cause of heart trouble in school children is undoubtedly rheumatic and other forms of infection, and the commonest site of entry of such infection into the body is through the tonsils. It has been shown that in the case of children and often in the case of adults, the heart may become very seriously involved by repeated infections which show little or no outward manifestation of their existence. Vague "growing pains" or even a slight febrile attack, without any pain at all, are often the only indications given.

The potency of chills and sitting in school with wet feet or damp clothes to act as predisposing causes are so well-known that one only mentions them to complete the account of the methods which are most likely to be of use in the prevention of heart disease in school children.

These are :—

(1) The treatment of enlarged tonsils, adenoids and septic conditions of the mouth and throat.

(2) Provision of adequate means of drying wet boots and cloaks.

The importance of the prevention of heart disease in the case of a working class district cannot be over-estimated.

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(8) Lewis. British Medical Journal, March 8th, 1913. Signs of Myocardial Involvement.

A most useful form of special inquiry would be an investigation into the condition of the myocardium of children employed out of school hours.

A polygraph would be most useful for this purpose. A reliable instrument can be obtained for ten guineas. The price of the electric cardiograph is of course prohibitive.

Lungs and Tuberculosis.

Table comparing cases of phthisis and other forms of tuberculosis detected during 1913, with those of previous years.

Year	Group	Number Examined	Cases of Phthisis	Other forms of Tuberculosis	Total cases of Tuberculosis	Percentage of Tuberculosis
1911	Routines	11866	52 [75]	70	122	1·028
1912	Ditto	10332	38 [79]	60	98	0·948
1913	Ditto	10815	24 [47]	59	83	0·767
1911	Specials	—	—	—	—	—
1912	Ditto	2594	67 [91]	31	98	3·778
1913	Ditto	2143	92 [68]	39	131	6·113
1911	Routines and Specials	—	—	—	—	—
1912	Ditto	12926	105 [170]	91	196	1·516
1913	Ditto	12958	116 [115]	98	214	1·651

The figures in square brackets denote doubtful cases of phthisis and are not included in the percentages.

The records relating to specials for the year 1911 were incomplete and therefore could not be included.

The decline in the percentage of phthisis cases among the routines appears to apply to most localities and is generally said to be attributable to increased experience in diagnosis. Cases of early phthsis in school children can only be diagnosed with certainty after much practice.

Nervous System and Mental Condition.

A special report on the subject of feeble-minded and epileptic children was compiled and printed in July, 1912. Since October last I have been engaged in the re-examination of these cases and in the examination of any fresh cases that have since cropped up. Up to the present I have only been able to complete this re-investigation so far as the Hanley district is concerned. Taking, however, the figures contained in the special report, adding the number of cases which have since occurred and deducting any that are known to have either since died or removed from the district, the following figures are arrived at and may be taken as fairly reliable:—

Epileptics	104
Percentage of total number of children on the rolls	0·2
Feeble-minded, imbeciles and idiots ..	308
Percentage of number of children on rolls	0·7
Number classified as likely to require permanent custodial treatment ...	55

Defective Vision and Squint.

Copies of the report of the British Association on children's eyesight were obtained and sent to each member of the Medical Inspection Sub-Committee. A short summary of this report, together with a summary of the discussion at the International Medical Congress on the subject of the causes of myopia in school children was appended to my report for the combined months of July and August last.

I also included the results of a special inspection of school text books. While there did not appear to be much divergence from the standard recommended by the British Association Committee in the case of the senior departments, whether as regards the size and kind of type or the quality and surface of the paper, in the case of the Infants' Departments the divergence was so wide in many cases that I drew special attention to the course advised both by the Committee of the British Association and the International Medical Congress of abolishing teaching by means of books altogether in the case of children under seven years of age. It was decided at the meeting of the Medical Inspection Sub-Committee at which these reports were considered, to request Head Teachers to make arrangements with their Staff for testing the eyesight of every child of seven years of age and upwards by means of Snellen's test types for distant vision once every year, all children exhibiting a visual defect of 6/18ths or worse when first tested, as well as any showing a decrease of visual acuity since they were last tested, to be reported to the School Medical Officer. As an outcome of the discussion commenced at this meeting it was ultimately resolved to apply to the Board of Education for sanction to the provision of spectacles for poor children.(9)

As soon as the lists are received at the office it is proposed to send notices to the parents that these children's eyesight is defective. These cases will then be followed up and any not attended to dealt with at the new School Clinic.

The attention of Head Teachers is also being drawn to the advisability of abandoning the use of text books in the case of younger children.

Squint is one of those conditions which requires additional facilities for treatment.(10)

A certain number will be benefited by the new School Clinic through correction of accompanying errors of refraction. There are, however, a number of cases of squint associated with hypermetropia in which the fusion sense of images resulting from binocular vision has either been lost at an early age or has never developed. Treatment in such cases should be commenced much earlier in life and affords one of the many instances showing the necessity for the provision of treatment for children under school age.(11)

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(9) Section—Following up. Page 32.

(10) Table in section on following up Page 30.

(11) Schools for Mothers and Medical Inspection of Children under School Age. Page 93.

It is highly probable that more attention will be paid to the subject of eyestrain in school children than has been customary hitherto.

Revived impressions of previous muscular contractions on the part of the little muscles of the eye are largely concerned with the perception of the static attributes of bodies—size, position and form.(12)

Dr. Bevan Lewis has shown how the impaired perception accompanying certain morbid mental states is directly due to indistinctness of these muscular representations. Consequently any conditions calculated to set up muscular asthenopia in school children must be prejudicial to their mental development. For this reason one is careful to investigate this point when examining alleged mental deviates.

Defective Hearing.

The results obtained through the employment of the forced whisper test have been entered on the scholars record cards under the same headings as those contained in the Board's model table. To economise clerical labour, however, only two headings were used on the summary sheets. The necessary additional headings will now be added. The far-reaching effects of early impairment of the hearing faculty is well illustrated by the following case seen at the psychiatric department of the school clinic. Child aged 11 years. Mother states that its hearing has been very bad since the age of thirteen months through an illness contracted at that time. In consequence one found that, although one could make it hear, it understood very little of what was said to it, its speech was very imperfect and its stock of ideas very limited. The proper treatment for such a case would of course consist of a special course of instruction in lip-reading and articulation. It is a great pity that the child was not examined as to its mental condition at a much younger age, as its chances of benefiting by the treatment indicated would have been so much greater.

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(12) Bevan Lewis. Text Book of Mental Diseases. "Failure in the Muscular Element of Thought." "A vigorous perception of these primary or space attributes of body is dependent largely upon our sixth or muscular sense. If, therefore, this sense undergoes any diminution so will the space attributes of body become less vividly conceived—the cognition is but feebly produced."

The next table is the third of the Board's model series. It was impossible at such short notice to ascertain the number of all retarded children according to age and standard.

Arrangements have been made for the keeping of a register of all children absent from school on medical grounds, giving the date of absence and the date of return.

Table 3.—Numerical Return of all Exceptional Children in the Area.

		Boys	Girls	Total
BLIND (including partially Blind)—				
	Attending Public Elementary Schools	7	6	13
	Attending Certified Schools for the Blind	8	2	10
	Not at School	3	3	6
DEAF & DUMB (including partially Deaf)—				
	Attending Public Elementary Schools	35	24	59
	Attending Certified Schools for the Deaf	23	18	41
	Not at School	6	1	7
MENTALLY DEFICIENT—				
Feeble Minded	Attending Public Elementary Schools	133	80	213
	Attending Certified Schools for Mentally Defective Children	2	—	2
	Not at School	12	10	22
Imbeciles	At School	3	—	3
	Not at School	6	8	14
Idiots		8	6	14
EPILEPTICS—				
	Attending Public Elementary Schools	57	29	86
	Attending Certified Schools for the Epileptic	—	—	—
	Not at School	10	8	18
PULMONARY TUBERCULOSIS—				
	Attending Public Elementary Schools	45	42	87
	Attending Certified Schools for Physically Defective Children	—	—	—
	Not at School	28	55	86

		Boys	Girls	Total
OTHER FORMS OF TUBERCULOSIS—				
	Attending Public Elementary Schools	39	45	83
	Attending Certified Schools for Physically Defective Children	—	—	—
	Not at School	11	4	15
PHYSICALLY DEFECTIVE—				
Cripples other than Tubercular	Attending Public Elementary Schools	2	1	3
	Attending Certified Schools for Physically Defective Children	—	—	—
	Not at School	10	25	35
BACKWARD OR DULL—				
	Retarded 2 years			
	Retarded 3 years			

Following up and Supervision of Children found Defective.

"Following up" consists in the employment of certain methods in order to ascertain to what extent facilities for treatment of defects found at medical inspection are available and whether use is being made of such facilities as exist.

The process has been carried on in the Borough by means of the following agencies:—

(1) The Teachers.
(2) Re-inspection at School.
(3) Re-inspection at Inspection Clinics.
(4) Home visiting by School Nurses.

At the conclusion of each visit for medical inspection, a form, Form C, is handed to the Head Teacher containing the names of all children found defective, the nature of these defects and directions to parents and teachers concerning treatment and management.

Additional columns are provided for notes as to the subsequent progress of each case.

The whole is contained on a card of the same size as the ordinary medical inspection card.

On the occasion of the Medical Officer's next visit, this form is produced and all children present in school, who have previously been noted as defective, have been re-examined. In instances in which it is advisable to see the child more frequently than is possible by this method, it is directed to attend at one of the Inspection Clinics.

Head Teachers have also used their influence, whenever possible, towards securing treatment, and in many instances have written to the School Medical Officer specially drawing attention to cases of culpable neglect.

When one of the parents or a reliable substitute has been present at the medical examination of a child, the nature of the defects found together with any necessary directions have been explained verbally; when not present, in writing. These notices have been written at the school by the Medical Officer inspecting and have usually been sent by hand.

There have been two Inspection Clinics in the Borough from the commencement, one at Hanley and one at Burslem. It having been pointed out in previous annual reports that the addition of a third was necessary to deal with children of the Fenton and Longton districts, such clinic was established at the Fenton Town Hall in September last. This was urgently needed, and it will now be possible to devote more attention to the work of following up in that part of the Borough.

The number of visits paid to the homes of the children by the School Nurses in connection with the work of following up amounted to 191.

The following table indicates the results ascertained by re-inspection and includes cases inspected for the first time during previous years.

In instances in which a child has been re-inspected several times, the final result only is given.

Table showing results ascertained through following up of cases found defective at medical inspection.

Nature of defect found		Number of cases followed up	Results ascertained							
			Defect remedied		Condition improved		Condition unchanged but under treatment		Condition still untreated	
			No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
Defective clothing		110	24	23·6	48	43·6	—	—	38	34·5
Defective footgear		26	9	34·6	10	38·5	—	—	7	26·9
Uncleanliness		844	236	27·9	212	25·1	108	12·8	288	33·6
Defective nutrition		136	18	13·2	36	26·5	52	38·2	30	22·0
Nose and Throat	Mouth breathing	82	15	18·3	11	13·4	44	53·6	12	14·6
	Adenoids	69	22	31·9	13	18·8	10	14·5	24	38·8
	Enlarged tonsils	246	29	11·8	38	15·4	58	23·6	121	49·2
External eye disease		181	73	40·3	40	22·1	29	16·0	39	21·5
Ear disease		73	14	19·3	19	26·0	29	39·8	11	14·9
Defective teeth		224	48	21·4	14	6·2	37	16·5	125	55·8
Defective heart and circulation		149	10	6·7	41	27·5	72	48·3	26	17·4
Lungs	Catarrhal affections	59	13	22·0	10	16·9	28	47·4	8	13·6
	Phthisis	112	4	3·6	32	28·6	70	62·5	6	5·2
Defects of nervous system		40	7	17·5	10	25·0	15	37·5	8	20·6
Skin Diseases	Ringworm	199	58	29·1	55	27·6	57	28·7	29	14·6
	Other infective	115	66	57·4	19	16·5	14	12·1	16	13·9
	Non-infective	52	24	46·1	9	17·3	16	30·8	3	5·7
Tuberculosis other than pulmonary		46	6	14·1	12	26·9	20	43·5	8	17·4
Deformities		61	10	16·4	4	6·5	30	49·2	17	27·8
Speech defects		12	—	—	7	58·3	2	16·7	3	25·0
Visual defects		581	136	23·4	18	3·1	92	15·8	335	57·6
Squint		95	11	11·5	2	2·1	25	26·3	57	60·0
Defective hearing		62	14	22·6	6	9·6	20	32·2	22	35·5
Other diseases or defect		156	76	48·7	24	15·4	24	15·4	32	20·5
Total		3730	923	24·7	690	18·5	852	22·8	1265	33·9

In addition to these, the School Nurses have re-examined the heads and clothing of 4,503 children who had previously been found to be in a dirty and verminous condition and whose parents had been notified accordingly. The results ascertained were as follows:—

Number of children re-examined ...	4,503
Number now found to be clean	1,189
Percentage	26·4
Improved	2,204
Percentage	48·9
No improvement	1,110
Percentage	24·6

These percentages, though showing the amount of work done by the School Nurses, also show the necessity for the provision of additional means for securing cleanliness in school children.

It will be seen that the highest percentage of instances in which no treatment at all had been obtained had reference to the following defects in the order named:—Squint 60 per cent., visual defects 57 per cent., defective teeth 55 per cent., and enlarged tonsils 49 per cent.

Those in which the children were under treatment but whose defective condition showed no improvement were:—Phthisis 62 per cent., mouth breathing 53 per cent., deformities 49 per cent., disease of the heart and circulation 48 per cent., and catarrhal affections of the lungs 47 per cent.

Having regard to the serious nature of such defects, the following percentages indicate also the necessity for the provision of additional facilities for securing adequate treatment:—Tuberculous diseases other than pulmonary, no improvement 43 per cent., untreated 17 per cent.; ear disease, no improvement 39 per cent., untreated 14 per cent.; and external eye diseases, no improvement 39 per cent., untreated 21 per cent.

The number of children treated at the hospitals amounted to 171.

There is a voluntary fund for the provision of spectacles to poor children in Hanley and Burslem, but hitherto there has been no means for securing their provision in other parts of the Borough. The number of instances in which parents residing in those parts where there is no such provision, who are too poor to provide spectacles for children who need them, having been ascertained to amount to 84, it was decided in October last to make application to the Board of Education for sanction for the provision of spectacles by the Local Education Authority for such cases. This sanction has since been received.(1)

In addition to this number, there is a far larger one where parents are unable to afford a specialist's fee for the necessary testing and prescription.

A great deal of the time of the Honorary Ophthalmic Surgeons at the North Staffordshire Infirmary has been taken up over this matter, but there is still a large number of children unprovided for.

It was, therefore, decided to include the estimation of errors of refraction and the giving of prescriptions to such cases, in the work of the new School Clinic at Hanley.

Pending the decision of the special Sub-Committee appointed in November last, to consider details as to the establishment of a definite Cleansing Scheme under Section 122 of the Children Act, the existing mode of procedure in cases of dirty and verminous children whose parents have been found to be neglectful, has been to require the attendance of such parents before one of the local Bye-Laws Sub-Committees. The number of instances in which this expedient was resorted to amounted to 36. In 29 of these a warning to the parents on the part of the Chairman was found to be sufficient, while in the remaining seven the father was prosecuted under the Attendance Bye-Laws, a conviction was obtained in each case and a fine of from 7/6 to 10/- imposed.

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(1) Medical Inspection Sub-Committee, Jan., 1914. Minute 366.

The Stipendiary Magistrate has announced in Court, that the minimum penalty he intends to impose in such cases will be a fine of 7/6, as he considers them far more serious than ordinary school attendance cases.

Treatment of Defective Children.

Sir George Newman has defined the term "treatment" in connection with school medical work, as "comprehending all influences whether they be educational, preventive or curative which ameliorate or improve the physical condition of children during school life"(1); and the Board of Education in Circular 586,(2) gives a list of methods for the guidance of Local Authorities desiring to undertake this work which will be found to include almost all matters dealt with in the succeeding sections of this report.

It is, however, with the question of the provision of medical treatment by Local Authorities for individual cases that the present section mainly deals.

In the course of a later circular,(3) the Board classifies the methods available for this purpose into two main groups:—

(1) Medical treatment proper.
(2) Work associated with medical treatment or ancillary thereto.

Most of the matters contained in the second group have been dealt with in the preceding section. As, however, it is more convenient to include everything connected with the new School Clinic under one heading, some items will be referred to here.

School Clinics.

A fully equipped School Clinic serves many purposes(4) and is:—

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(1) Annual Report. Chief Medical Officer. Board of Education. Section IV.

(2) Arrangements for attending to the Health and Physical Condition of School Children.

(3) Circular 792. Grants for Medical Treatment of Children attending Public Elementary Schools.

(4) A detailed account of the advantages afforded by school clinics is contained in an excellent little book entitled "School Clinics at Home and Abroad," by Drs. Cruickshank & Mackenzie, published by the National League for Physical Education and Improvement.

(1) A centre where more detailed examination of individual children may be carried out than is possible in the schools.

(2) A centre at which children found defective at medical inspection may be kept under supervision.

(3) A centre for the examination of children with regard to their fitness to attend school.

(4) A centre for the examination of special cases, sent up by Head Teachers and School Nurses, who are thought to be in need of medical treatment.

(5) A centre at which the treatment of certain morbid conditions may be carried out.

Its functions may therefore be broadly classified into two groups:—(1) Inspection (2) Treatment.

As already stated, there are now three clinics in the Borough at which the first of these functions is carried out, so far as this can be done without special equipment, and the removal of one of them during the year, to more suitable premises coupled with the provision of special appliances and drugs, has rendered possible the exercise of the latter. In September, 1912, I was instructed to submit a scheme of medical treatment for consideration. This was considered by a special Sub-Committee which met on December 18th of that year, when it was decided to establish a central clinic for the treatment of minor ailments in school children. After further consideration, formal application was made to the Board of Education on the 13th March last, for sanction to the establishment of such clinic at the old Y.M.C.A. buildings in Hanley. This sanction was received on September 19th.

The whole building is the property of the Local Authority and is used as a temporary annex to the Secondary School. Three rooms on the ground floor have been converted into a school clinic. A nucleus has thus been established which is capable of considerable extension when the remaining part of the building becomes available. In the meantime the part used as a clinic has been completely shut off from that used in connection with the school.

The enclosed plan has been prepared by the School Architect, Mr. Ashworth, and serves to illustrate existing arrangements.

The Clinic consists of a waiting room, a treatment room and an examination room, the latter being fitted with a dark cubicle for ophthalmic work.

In order to maintain conditions of cleanliness and asepsis, the floors throughout have been covered with Val de Travers asphalt and the walls treated with duresco. Separate sanitary conveniences have been added for the children and staff, the forecourt has been walled off from the adjoining Girls' Entrance to the Secondary School and the whole clinic fitted with electric light.

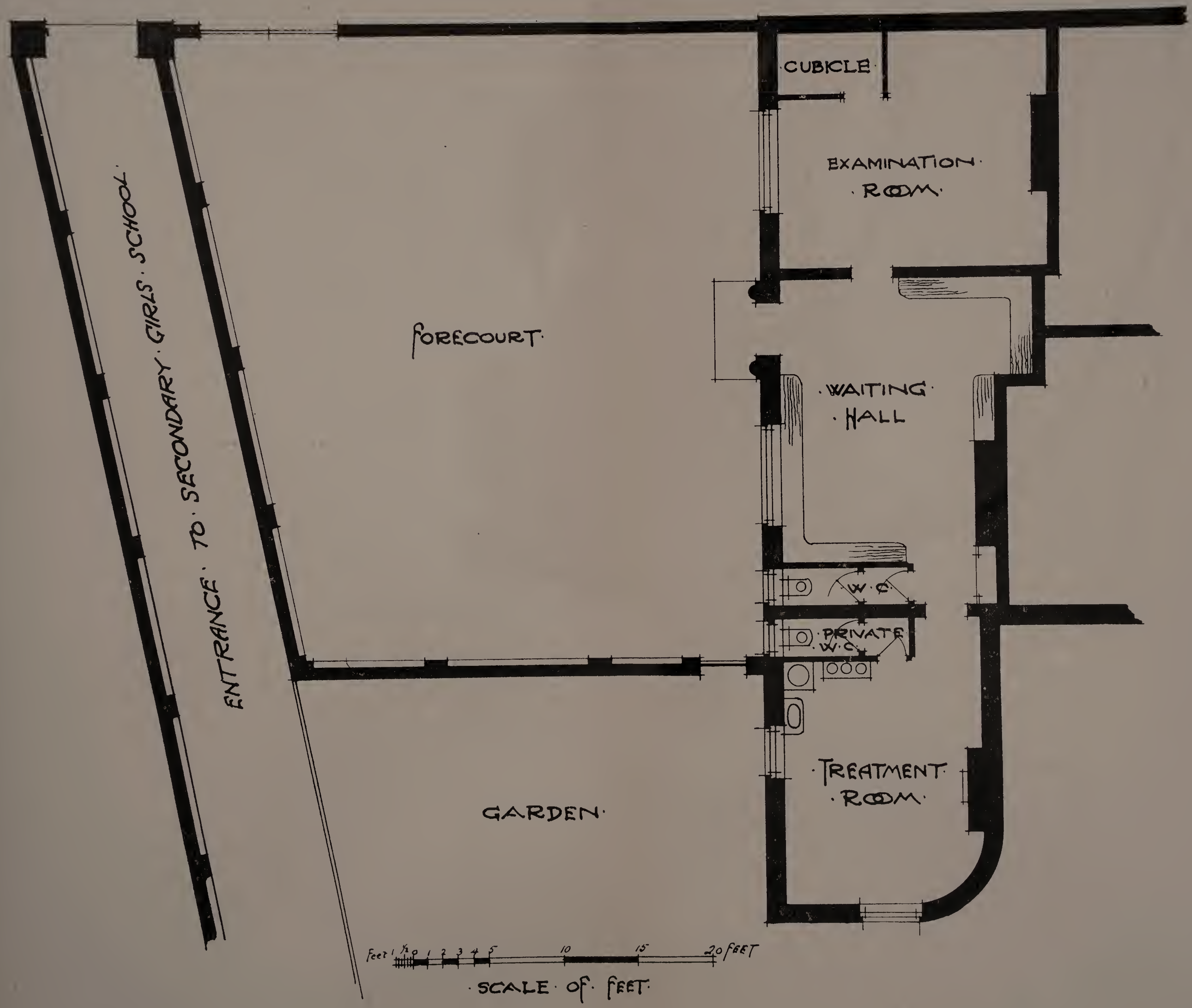
The Treatment Room contains a sink fitted with a supply of hot and cold water, the former being obtained by means of a gas-heater, and is supplied with three small sterilizers.

The equipment includes a microscope for examination of ringworm cases, the necessary appliances for detailed examination of the eye, ear, nose and throat, including a case of trial lenses, an outfit for the examination of mental deviates, and a supply of metal combs, hair cutters, epilation forceps, scissors, lotions, ointments, dressings, etc., for carrying out the treatment of minor ailments.

The total cost was as follows :—

	£	s.	d.
Alterations to premises (including provision of gas-heater, electric light, paving plastering, painting and plumbing) ...	236	14	1½
Instruments	21	16	9
Lotions, ointments, dressings, &c. ...	2	11	5
Furniture	9	18	6
Sundries		15	8
Total ...	271	17	3½

SCHOOL · CLINIC · HANLEY ·



The work at present undertaken at this clinic may be classified into two groups:—

(1) General, including treatment of dirty and verminous heads, ringworm and other infective skin diseases, infective conjunctivitis, blepharitis and discharging ears.

(2) Special, including detailed examination of the eye, ear, nose and throat, the prescription of spectacles, and the examination of mentally retarded children.

As the formal sanction of the Board of Education was not received until September, it was impossible to complete the necessary alterations before the end of the year. Refraction work has, however, been carried out since the middle of December, and special examination of the mentally retarded since October.

The work in connection with this last may be said to constitute the establishment of a juvenile psychiatric clinic. Psychiatric clinics have been established for some years in America and various parts of the continent, and the Medico-Psychological Association has drawn attention to the need for them in this country.(5)

The Lunacy Act, 1890, authorises the provision of Asylum treatment only, it does not permit any expenditure on out-patients or voluntary boarders, nor does it make any provision for what may be termed "hospital ward treatment." Although it is true that mental out-patients are now seen at several of the London hospitals,(6) the fact holds good as a general rule that there are no existing facilities for securing expert treatment for poor persons in the early and therefore most curable stages of mental disease, but that they have to wait until they have become certifiably (which too often means incurable) insane before they can secure adequate treatment at all.

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(5) Journal of Mental Science, Jan. 1913. Legal Conditions as to the Care and Treatment of Poor Persons suffering from Mental Disorder in England and Wales, with reference to the possible establishment of Psychiatric Clinics. Ibid., October, 1913. Report of Committee re Status of British Psychiatry.

(6) The present writer was first initiated into the science of psychiatry at the mental out-patient department of St. Thomas' Hospital on its establishment in 1893 under Dr. Henry Rayner.

The establishment of acute mental hospitals and psychiatric clinics and the linking up of their work with that of psychiatric departments of school clinics would constitute a valuable combination for dealing with the early detection and prevention of mental disease, and result in the saving of much misery to individuals and much expense to the country. The difficulty of obtaining reliable previous histories even in the case of younger admissions to asylums is well known. The establishment of an organisation such as that described would, therefore, not only contribute to a better understanding of the ætiology of many cases in which it is at present obscure, but would also afford opportunities of giving valuable advice and timely warning. Another use for the juvenile psychiatric clinic consists in the facilities afforded for the proper examination of mentally retarded children.

A psychiatric, or as it is there called, a "psychological" clinic, has been in existence for some years at Philadelphia,(7) and is the centre of many activities. Mentally retarded children are referred there for examination by a specialist who has been trained in experimental psychology, inquiries are made as to home environment and supervision and advice on many important matters connected with home life is given by the "Social Worker," who is a woman attached to the institution. A number of facilities also exist for expert examination and treatment by specialists of diseases of the special sense organs and other physical conditions.

Each mentally retarded child undergoes an exhaustive examination and both pedagogic and psychological tests are employed in the investigation of its mental condition. The weak point in the whole organisation consists in the fact that the Head of the institution is a psychologist pure and simple without any medical qualifications, and consequently a child is sent on a number of journeys from one specialist to another.

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(7) Holmes. The Conservation of the Child.

many of which would be unnecessary had the initial examination been conducted by a medical man trained in psychiatry.

Although our own arrangements cannot be considered as anything but embryonic beside the highly organised system at Philadelphia, they are capable of almost unlimited development.

In this Borough we have what every large centre ought to have, a Director of Education, an expert in the science of pedogogy; and as questions regarding diagnosis and treatment are constantly arising which are sometimes concerned with medicine and sometimes with pedagogy, a consultation between the Director of Education and the School Medical Officer, each contributing his own special knowledge to the discussion, must be of enormous additional advantage to the child. In my monthly report for October last, instances were given of such consultations between myself and Dr. Freeman in order to illustrate this point. For example:—Child, age 10, reported to be mentally defective. The Binet-Simon tests indicated a retardation of two years, child found to be "word blind," could copy and even convert printed into written matter, but could not read the simplest word. As a result of Dr. Freeman's attempts with the child, it was quite obvious to both of us that learning to read in this case was a matter entirely of skill on the part of the teacher and of individual attention.

Much of the work performed at Philadelphia by the "Social Worker" has been undertaken in our own case by the School Nurses, and much valuable information, especially as regards family history, has been obtained through them.

Appended is a copy of the special medical inspection card one has drawn up for use in the examination of these cases. Though originally intended for my own private use only, it is given for what it is worth. An ideal card for this purpose has yet to be compiled.

Stoke-on-Trent Education Committee. Special Card for Mental or Moral Deviates.

Name of Child.. *Address*...

Date of birth...............................*School*..*Department*...............................*Standard*......................

Report of Head Teacher :—

FAMILY HISTORY	PREVIOUS HISTORY	GENERAL PHYSICAL CONDITION
Occupation of Parents { F. M. Number in family Living (ages) Dead (age at and cause of death) Miscarriages Certified Insanity Feeblemindedness Criminal Propensities Alcoholism Tuberculosis Syphilis Epilepsy Physical state of mother during gestation General home conditions Other characteristics	Specific infectious diseases Diseases of nervous system Other diseases Character of birth Injury at or subsequent to birth Age at commencement of { Teething Standing Walking Speech	*Height* *Weight* *Cranial Measurements* { Circumference Vertical perimeter Maximum frontal perimeter Maximum parietal perimeter *Stigmata, Deformities, etc.*

Schedule of Medical Inspection of Mental or Moral Deviates.

Date of Inspection
Age of Child
Nutrition

State of :—
  Thoracic Organs
  Abdominal Organs
  Nose and Throat

General condition as to Cleanliness, &c.

MOTOR MECHANISM.

General motor excitability
Co-ordination
Paralysis or paresis
Spastic rigidity
Reflex muscular action

Epilepsy
Reaction by imitation and to word of command :—
    Simplex actions
    Complex actions
Speech

SENSORY MECHANISM.

General reaction to sensory stimulation
Eye (including errors of refraction)
Ear

Muscular sensibility
Cutaneous sensibility
Organic sensations

MENTAL PROCESSES.

Perception
Attention
Volition (especially inhibition)
Habits

Instincts

Association and Memory
Imagination
Judgment and Reasoning
Emotions and Sentiments

REACTION TO BINET'S TESTS.

Age group (all tests passed)

Tests of aditional age groups passed

Summary diagnosis and treatment recommended—

....

School Medical Officer.

Subsequent progress notes—

On the reverse side there is a heading "Report of Head Teacher." This, to some extent takes the place of a pedagogic examination and also affords valuable information as to habits and general conduct. Most of the remaining headings on this side are based on suggestions contained in Dr. Threadgold's excellent book "Mental Deficiency."

The other side of the card is divided into seven sections, the first containing a general summary of the physical condition, more fully recorded on the ordinary medical inspection schedule, the next three contain headings concerning the condition of the motor and sensory mechanisms and the more important mental processes, and the fifth records results obtained through the application of the Binet-Simon tests of general intelligence. The two final sections are devoted to a general summary of the findings together with the diagnosis and the form of treatment recommended.

The headings "general motor excitability" and "general re-action to sensory stimulation" serve to place in a prominent position certain characteristics, included incidentally under other headings, which show at once whether a given case belongs to the vivacious type with keen but constantly shifting attention of the reflex variety, or to the dull and phlegmatic type whose attention is aroused with difficulty and who appears to be interested in nothing. The clear differentiation of these two types appeared to me to be an advantage from the educational standpoint. Owing to the fact that the mental faculties of the child are still in a state of progressive development, an estimate of its mental capacity is a far more difficult matter than in the case of an adult, not only would what is normal in the case of a child of ten be considered abnormal in a person of forty years of age, but there is a considerable difference as regards the normal state of mental development even between children whose ages are only a few years apart.

The Binet-Simon tests of general intelligence at different ages, now applied practically all over Europe, and to a considerable extent in America, must, sooner or later, give rise to conclusions of the greatest value; in the meantime, they are useful more as aids in conjunction with other methods than as absolute tests of themselves. During their employment many of the mental faculties enumerated on the card are of course incidently tested. The copying of a design from memory,(8) for example, affords a test for memory and imagination as well as for muscular co-ordination and control, while every test of the series may be said to be a test of attention.

One may say as the result of one's own experience of the employment of these tests that their application is by no means as easy as would appear at first sight, and that one's earlier efforts were characterised by a tendency to over-estimate a child's general intelligence by their use. It requires a considerable amount of practice to overcome one's natural inclination, often present almost unconsciously, to "help a child out" and one is also very apt to forget the importance of the time limit in the application of many of the tests.

The influence of emotional states and of mental fatigue must also be constantly borne in mind, especially in the case of younger children.

The prominence given of recent years to "association tests" renders the question of their application in connection with this work of special interest. Apart, however, from the uncertainty of their value, at least as regards the estimation of general intelligence,(9) the amount of time involved renders their application practically an impossibility so far as we are concerned, though it is possible that the application of carefully selected "word association tests" may prove of some value in the investigation of certain alleged "moral cases." Both

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(8) Binet-Simon Test. Age group, 10. No. 2.

(9) Kent and Rosanoff, for example, after quoting Fuhrman to the effect that the number of reaction words given in response to 100 stimulus words affords a test of intelligence of some value, state as a result of their own extensive experiments that they have failed to observe any considerable difference in this respect with regard to persons of different ages and degrees of education. Kent & Rosanoff, American Journal of Insanity, July and October, 1910. A study of Association in Insanity.

Professor Holmes(10) and Professor Sandiford(11) speak of their use in this connection as a means of indicating much that a child is most anxious to conceal.

The employment of this and other association methods forms the basis of the modern psycho-therapeutical agency known as "psycho-analysis."

This process has given rise to a new system of psychology which is so much concerned with child life that it is attracting an ever increasing amount of attention on the part of educationalists.

Psycho-analysis and the psychological system to which it has given rise, originated with Professor Sigmund Freud of Vienna. According to the Freudian school, every child comes into the world endowed with certain in-born instincts, giving rise to a series of impulses by which these seek to attain gratification.

While, however, the infant, and to a lesser extent, the savage, gives free place to these impulses regardless of the appropriateness of time or place, such action would be intolerable in any adult civilised community. Hence an element of "psychic censorship" is introduced which is the product of ethical and religious training, or, in other words, of education. By means of this psychic censorship, many of these impulses are either repressed or so transformed as to bear no resemblance to the original.

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(10) Holmes. The Conversation of the Child.

(11) Sandiford. Mental and Physical Life of School Children. Association. The well-known experiment is quoted of ascertaining which of two boxes a given person has peeped into by the employment of a series of stimulus words, some of which are calculated to call up in the mind of such person a reaction word corresponding to the name of an object the box contains. The person naturally substitutes another word and the amount of time so lost causes a delay in reaction time sufficient to indicate the box in question. Prof. Sandiford adds that such methods are more likely to be of use in the police court than in the school-room, but apparently forgets the school clinic. The value of such delayed reaction time as a "complex indicator" is of course laid much stress on by Jung, Freud and other pyscho-analysts.

The resultant of these opposing forces varies in different cases, and leads, in many instances, to experiences the remembrance of which is excessively painful.(12)

It appears that some are able to repress all thoughts connected with these experiences completely from consciousness. Neither they, however, nor the impulses through which they arose, are banished from the mind, but merely thrust into its unconscious spheres, from whence they are continually trying to re-assert themselves. This gives rise to a struggle between them and the psychic censor, resulting in a compromise which takes the form in consciousness of numerous neurotic and psycho-neurotic symptoms, varying from nail-biting, night terrors, stammering and other neuroses of childhood, to hysteria and the more serious psychoses of adult life.

The object of psycho-analysis is to recall the repressed complex to conscious memory from which it is excluded by the ban of the psychic censor. When this has been accomplished an emotional outburst occurs, called the "abreaction," and the psycho-neurosis is cured.

The methods usually employed are dream analysis, free association and word association. Dreams, being products of the unconscious, special importance is attached to their investigation.(13)

The desires of mankind are insatiable,(14) but if gratification be denied in one direction it is partially obtained in another. Thus a child, desirous of mounting a horse and going to battle like its father, may gratify his desire in the way described in Scott's " Lay of the last Minstrel " :—

> " A fancied moss trouper the boy,
> The truncheon of a spear bestrode,
> And round the hall right merrilly
> In mimic foray rode."

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(12) Repressed complexes unearthed by pscyho-analysis are "all of a nature adapted to provoke the affects of shame, reproach, mental pain and a feeling of injury; they are altogether of that kind which one would like not to experience and prefers to forget." Brill. Psycho-analysis. Quoting Freud.

(13) Freud. The Interpretation of Dreams.

(14) In this view, Freudians and Christian theologians appear to be at one.

The "truncheon of a spear" in such a case affords an instance of a "wish fulfilment by symbolism." These "symbolic wish fulfilments," according to Freud, play a considerable part in our mental life, and may manifest themselves in the form of psycho-neurotic symptoms, various little eccentricities which form part of the actions of everyday life and in dreams.(15)

The relationship of these symbolic wish fulfilments to the original desire is so remote that it is quite unrecognised by the subject unless revealed by the lengthy process, psycho-analysis.(16)

Although the practice of psycho-analysis is outside the range of practical politics so far as our school clinic is concerned, the ever increasing number of facts brought to light, through its practice elsewhere, concerning the psychology of childhood, must exert a considerable amount of influence over the educational methods of the future, and are certainly most useful as regards the early recognition of abnormal manifestations and hence as regards prevention.(17)

The outfit of the Psychitric Department of the School Clinic consists of a dynamometer, an æsthesiometer, two mosaic tile boxes (Phillip's "Series of Varied Occupations"), five pill boxes of the same size and appearance, covered with paper and containing varying quantities of powder so as to weigh 3 grams, 6 grams, 12 grams, 15 grams and 18 grams respectively for testing muscular sense; nine pieces of wood, three covered with sandpaper, three with velvet and three with tin, representing rough, smooth and hard surfaces respectively to test tactile sensibility ; a similar series of wooden pieces shaped as circles, octagons, hexagons, squares and oblongs for testing form sense (several defective children fail to discriminate between squares and oblongs and a much larger number between circles and octagons); a toy shop fitted with counter and scales and a supply of cardboard money ; two complete pictures, one easy to describe the other more difficult ; two incomplete pictures containing figures minus a foot, a hand, an arm, an eye and an ear ; a card containing heads with figures of different quality, two pretty, two medium and two ugly to test æsthetic sense ; a series of readers, cards containing skeleton sentences and an old coat fitted with buttons and laces to test co-ordination. One tried to get part of the Montessori outfit for this last purpose but apparently Dr. Montessori will not allow her agents to split a set.

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(15) According to Freud, a dream consists of two parts, the latent thoughts and the manifest thoughts, the latter constituting the dream as remembered by the subject on waking. These are evolved from the latent thoughts by a process of condensation, symbolism and displacement, so that the real significance of the dream is not recognised.

In psychopaths the dream always refers to the repressed complex, and the latent thoughts are revealed from the manifest thoughts by a long process of free association. Each person interprets his own dreams, the process being merely directed by the psycho-analyst.

(16) An instance of the unearthing of a "family skeleton" by the observance of a slip made by a friend in the course of conversation is recorded by Brill in his work "Psychanalysis." The reviewer in the British Medical Journal remarks, with reference to this incident, that phychoanalists are likely at times to prove embarrassing acquaintances.

17) See also section "Medical Inspection in Secondary Schools," pages 81—88.

Although such outfit may be considered to be of a very rough and ready description, a vast amount of useful work can be done by its means. Indeed it is preferable to a number of alarming scientific instruments such as form the outfit of a well appointed psychological laboratory. The latter would only serve to frighten the children, whereas Head Teachers tell me that most of those that have been to the clinic for purposes of examination appear to have enjoyed their visit and to have regarded it in the light of a "game." With one or two exceptions, I have experienced very little difficulty in overcoming initial shyness.

The number of children examined was 198, of these 93 were re-examinations of children examined in less detail during the previous year. This number has not been inserted in the "following up" table and accounts for the fact that the number there given does not coincide with that given in Table I. of the Board's series.

It is proposed to continue these examinations until all additional mentally defective and epileptic children of the Borough have been examined and a re-examination made of those contained in my special report on mentally defective children of 1912. This, one hopes to complete before the coming into operation of the Mental Deficiency Act on April 1st next.

Special Schools and Classes for Physically and Mentally Defective Children.

These special schools and classes serve two functions :—

(1) That of supplying special educational facilities for those who could not otherwise be retained within the National Educational System.

(2) That of affording the only effective means of treatment for certain defective conditions.

To some extent these two functions are combined in each case, the special schools and classes, however, which are mainly concerned with the first are :—

(1) Special Schools for the Blind and Deaf.
(2) Myope and Hard of Hearing Classes.
(3) Special Schools or Classes for the Mentally Defective
(4) Special Classes for the Dull and Backward.
(5) Special Schools for the Epileptic.

Those mainly concerned with the second are :—

(1) Country Convalescent Schools.
(2) Sanatorium Schools.
(3) Open-air Schools.
(4) Open-air Classrooms.
(5) Classes in the open air (Playground, Bandstand and Gardening Classes).

Blind and Deaf School.

At present the only special school in the Borough recognised by the Board of Education, is the Blind and Deaf School situated at The Mount.

This school is under the control of a Joint Authority, and has its own Medical Officer, who is a part-time official.

The number of children admitted during the year from the Borough was :—

Blind	1
Deaf	1
Total	2

The total number of children of the Borough resident is :—

Blind	10
Deaf	27
Total	37

Catholic deaf children are sent to the Deaf School at Boston Spa, Yorks. The number sent during the year was one, and the total number of children of the Borough resident at that institution is four.

Myope and Hard of Hearing Classes.

As facilities for detailed examination of children's eyesight were only forthcoming at the end of the present year, we have not hitherto been in a position to establish special myope classes. The provision of a special course of instruction in lip-reading and articulation for hard of hearing children has also yet to be considered.

Mentally Defective and Epileptic Children.

The remaining members of the first group of special schools and classes are concerned with the same subject, the treatment of the mentally defective and epileptic.

As already stated,(1) the Elementary Education (Defective and Epileptic Children Act) is at present permissive and not compulsory in character, the Mental Deficiency Act, 1913, however,(2) imposes the duty on all Local Education Authorities of making arrangements, subject to the approval of the Board of Education, for ascertaining what children between the ages of seven and sixteen years are defective within the meaning of the Act, what children are incapable of receiving benefit or further benefit from instruction in special schools or classes and of notifying to the Local Authority set up under the Act, the names and addresses of such children.

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(1) Page 8.

(2) Mental Deficiency Act, 1913. Sections 30 and 31.

In March 1912, I was directed to conduct a special investigation as to the number of mentally defective and epileptic children in the Borough. This I did, and a special report was drawn up,(3) printed and distributed among members of the Education Committee. A Sub-Committee was formed to consider it, but the withdrawal of the Mental Deficiency Bill from parliament coupled with the promise of its early re-introduction, rendered it inadvisable to proceed with the matter at that time.

Now, however, that this Bill has become law, it is necessary to re-open the question.

In October, 1912, the Medico-Psychological Association of Great Britain and Ireland published the report of its Committee on the Medical Inspection of School Children, in which a suggested schedule for the examination of children for mental defect was included, together with a number of recommendations and resolutions. Copies of this report were procured and sent to members of our own Sub-Committee. The report was also printed in the Journal of Mental Science, together with the report of the Select Committee of the Parliamentary Committee of the Association on the Mental Deficiency Bill.(4)

These recommendations and resolutions dealt with such matters as provisions for consultation in doubtful mental cases between School Medical Officers and recognised experts in mental disease, compiling reports as to the results of special treatment and the furnishing of medical superintendents of county and borough asylums by school medical officers with information concerning the children of inmates of these institutions.

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(3) Report, School Medical Officer, Stoke-on-Trent. Feeble-minded and Epileptic children with special reference to the recommendations of the Royal Commission on the Care and Control of the Feeble-minded, 1912.

(4) Journal of Mental Science, Oct., 1912.

Although no definite scheme was devised to deal with mental defectives of all ages, conditions and localities, the following points were suggested by the Association:—

(1) The establishment of the colony system for dealing with adults, epileptics (including epileptic children), children with bad home surroundings, morally defective children and children who had failed to benefit by special schools or classes.

(2) The establishment of special classes based on the Mannheim model,(5) for other mentally defective children.

The reasons for preferring the special class system to the provision of special schools has been frequently alluded to in my previous reports,(6) and are briefly these :—

(1) The fallacy of the saying "once feeble-minded, always feeble-minded," has been conclusively demonstrated.(7)

(2) There is a certain class of children, described in my reports as cases of "temporarily arrested mental evolution," whose condition is exceedingly difficult to diagnose.

(3) It is, therefore, of the utmost importance to avoid any premature "labelling" of children as feeble-minded as it would inflict a stigma which is calculated to interfere seriously with their future prospects.

(4) Such special schools almost invariably become known as "balmy schools" or "silly schools."

The two alternatives suggested are :—

(1) The establishment of special classes in connection with Public Elementary Schools.

(2) The establishment of a special school for other purposes, containing a feeble-minded section.

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(5) A description of the Mannheim system is contained in the report. A brief account is also included in my own annual report for 1912.

(6) Annual report, 1912. Report for month of October, 1913.

(7) Journal of Mental Science, October, 1912 and April, 1913.

Both of these arrangements have their own advantages and disadvantages. The relative merits of the two systems afford abundant material for discussion by our Medical Inspection Sub-Committee.

A plan of an existing school of the latter type will be found facing page 265 of the Annual Report of the Chief Medical Officer of the Board of Education, 1912. It consists of three distinct sections : phthisical, delicate and mental, each provided with a separate entrance and each complete in itself.

Whatever system be adopted, a complete scheme should include provision of special classes for backward, dull and observation cases.

The establishment of the psychiatric department at the School Clinic is also a notable feature.(7)

The question of the establishment of a colony is one which concerns the new Authority set up under the Mental Deficiency Act. I would, however, urge the desirability of considering the arrangements to be made whereby the education of the classes of children alluded to above as unsuited for special schools or classes, may be carried on at the colony, as at the Darenth Colony.

A provision for epileptic children, whatever form it may take, involves a *residential* institution. Special day schools for this purpose are not allowed.

The new Authority is empowered to deal with moral deviates of school age under Section 2 of the Mental Deficiency Act.

Open-air Education.

The schools and classes of the second group are appropriate for the treatment of the following conditions :—

Phthisis.
Other forms of Tuberculosis.
General Debility.
Anæmia.
Malnutrition.
Nervous Disorders.
Heart Disease.
Rickets.
Spinal Curvature.

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(7) Preceding section.

The Country School is intended for the accommodation of debilited town children for a brief period in the summer months; the Sanatorium School is practically a Juvenile Consumptive Sanatorium with educational facilities. Open-Air Schools provide for cases of phthisis and other forms of tuberculosis in the early, incipient and pre-tubercular stages, serve as Schools of Recovery for improved cases passed on from the Sanatorium and for cases of general debility, anæmia, malnutrition, nervous disorders, heart disease, rickets and some forms of spinal curvature.

The Open-Air Classroom and the holding of classes in the open air are suitable for minor degrees of many of the above-named conditions and are very valuable from the point of view of prevention.

"Open-air education" is quite distinct from education in the open air or in open-air classrooms or bandstands, and includes the provision of suitable meals, definite hours of rest, the practice of definite hygienic rules, medical treatment and a special educational curriculum.(8)

It is advisable, as far as possible, to keep all phthisical cases in an open-air school in an entirely separate section of the building.

The proposed new Council school at Oakhill has been designed by the School Architect, Mr. Ashworth, to include six classrooms of open-air type.

Playground classes are held oftener than they were, but there is still room for much improvement in this respect, especially in instances in which commodious playing sheds have been provided.

A gardening class has been held for some years at Normacot, and similar classes have been established during the present year in connection with the Stoke and Boothen C. E. Schools.

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(8) Annual Report Chief Medical Officer Board of Education, 1912, Sect. xii.—All these matters are there described in full detail.

Certain cases are also provided for at the Hanchurch Convalescent Home and by the North Staffordshire Cripples Aid Society.

The Hanchurch Children's Convalescent Home, supported entirely from voluntary sources, affords accommodation for 16 children at a time in the Convalescent Wing and for an additional 16 in the Cripples' Wing.

The ages of admission are from 4-14 years.

Each child. with the exception of those admitted to the Cripples' Wing in which the length of stay is indefinite, is admitted for a period of three weeks. This period can, however, be extended by the House Committee in exceptional cases.

Every child is required to obtain a medical certificate to the effect that it is free from infectious disease, from any affection requiring surgical treatment and that it has been vaccinated. In the case of children of the Hanley district, such certificate has been furnished by the School Medical Officer.

The Home is open throughout the year. the number of children resident during the year ended 31st March, 1913, being 313.(9)

Although the Cripples' Wing is not officially recognised by the Board of Education as a School for Physically Defective Children, and therefore does not receive any grant, instruction is given in reading. writing and simple basket making.

The North Staffordshire Cripples' Aid Society has an Honorary Surgeon in each of the six districts of the Borough to whom all new cases are sent for examination. a form being supplied on which results are tabulated. If an operation be ordered, the Society sees that the child is sent to the North Staffordshire Infirmary or to a specialist. If nourishing food be ordered and the parents are unable to provide it, the Society supplies milk, eggs, &c. A lady visitor is appointed to visit and report each case to the secretary at a monthly meeting held in each district.

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(9) Fifteenth Annual Report. Hanchurch Children's Convalescent Home.

Children are sent to the Cripples' Wing of the Hanchurch Home by this Society.

After leaving the Home the children are still under the care of the lady visitor, and on leaving school are put to a trade if possible. There is a shop for shoemaking, and a number are sent to the Cripples' Guild at Trentham.

Ninety-two children were sent for a fortnight's holiday in the country, and 4,404 for a day's country outing in connection with the Pearson Fresh Air Fund.

All the children of the Hanley district were medically examined before going away for the fortnight by a private practitioner, who gave his services free.

It appears that in the case of many of the other children no medical examination was made. Having regard to the danger of carrying infection and to the verminous condition of many children of this class, such medical examination is highly desirable. The School Medical Staff are quite willing to volunteer their services for this purpose.

The main object of Open-air Education is the prevention and treatment of tuberculosis, and consequently forms an important feature in all Tuberculosis Schemes. Not only, therefore, does it contribute to the general health of the nation, but it is also a means of saving financial loss. It has been shown that in London alone the loss of money spent in educating children who have been killed by tuberculosis before reaching adult life amounts to the annual sum of £327,185.(10)

"Comprehensive arrangements for the treatment of Tuberculosis children have yet to be made by Local Authorities." (11)

The local arrangements, so far, consist of a joint scheme with the Cheshire County Council for the provision of sanatorium treatment, the conversion of the Stanfield fever hospital into a tuberculosis hospital and the establishment of a tuberculosis dispensary. Valuable assistance has been given by the Tuberculosis Officer, Dr. Magill, in the diagnosis of doubtful cases among school children, and in advising as to the fitness of individual children to attend school.

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(10) Fairfax. School Hygiene, May, 1912. Note on Infectious Disease, Tuberculosis and Education.

(11) Annual Report, Chief Medical Officer, Board of Education, 1912. Section IV.

In my previous annual report, the formation of a special Sub-Committee was suggested, to be composed of members of the Health, Insurance and Education Committees, to consider the best means of dealing with the question of the prevention and treatment of tuberculosis among school children. This suggestion was adopted, and a conference of members of these Committees was held in September last. The Chairman of the Insurance Committee pointed out that, owing to lack of funds, it did not appear that the Insurance Committee would be in a position to deal with the dependents of insured persons to any great extent, but that, so far as the beds of the Stanfield hospital were not required for insured persons, they might be used for dependents.

The question of utilising the parks as sites for open-air schools or classes having been raised,(12) it was agreed that, although the Conference could not pledge the County Borough Council, the members would use their influence to obtain permission for the use of portions of the parks for this purpose, should formal application be made by the Education Committee.

The whole question of dealing with tuberculous and pre-tubercular children is one of such magnitude and importance that it will require a great deal of further consideration before anything definite is decided. I would, however, venture to call the attention of the Medical Inspection Sub-Committee to the type of special school already referred to in this section in which phthisical, delicate and mentally defective children are all provided for in different sections of the same building.

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(12) This excellent suggestion was made by the Director of Education, Dr. Freeman.

Provision of School Meals.

The Education (Provision of Meals) Act was adopted by the whole Borough on April 28th, 1910, though it had previously been adopted by the late Borough of Burslem in December, 1908, and by the late County Borough of Hanley in February, 1909. The general supervision over its administration was first placed by the Board of Education in the hands of its Medical Department in the year 1910. Since that time considerable space has been devoted to this matter each year by the Board's Chief Medical Officer in his annual reports, and that for the year 1911 contains definite recommendations for the guidance of Local Authorities on several questions. The general policy of the Board, as detailed in these reports, may be summed up under three headings :—(1) Co-ordination of the work of feeding with that of the School Medical Service, (2) selection of children to be fed, (3) the educational aspect of the Act.

With regard to the first: the following have been given as the functions it is considered should devolve upon the School Medical Officer and his Assistants.(1)

(a) He should report to the Local Education Authority all cases of bad or insufficient nutrition observed in the course of medical inspection (whether routine inspection or special inspection). Such cases should be put on the feeding list pending investigations as to the cause of malnutrition.

(b) Cases of doubt as to the propriety of keeping any child (whether selected as a result of medical inspection or otherwise) on the feeding list should be referred to him for report before the decision is taken.

(c) Cases of temporary exclusion from the feeding list of children who are temporarily excluded on

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Annual Report Chief Medical Officer Board of Education, 1910.

medical grounds from school attendance should be notified to him.

(d) He should periodically inspect the registers of the attendance at meals, both as regards the attendance generally and as regards the attendance of individual children with whose cases he has previously been concerned.

(e) He should approve the dietary.

(f) He should satisfy himself of the hygienic condition of the feeding centres.

(g) He should supervise the quality, quantity, cooking and service of the food.

(h) He should attempt to form and to record a judgment upon the effects of the proceedings taken under the Act upon the physical well-being of the children, both generally and as regards individual cases.

With regard to the second: Sir George Newman in his Report for 1911, drew attention so strongly to the desirability of adopting the "physical test" as opposed to the exclusive adoption of the "poverty test" that I thought it advisable to quote some of his remarks in my own annual report (2) for the special consideration of the Medical Inspection Sub-Committee.

With regard to the third: the Chief Medical Officer of the Board has pointed out from the first (3) that, as its very title indicates, the Education (Provision of Meals) Act is intended primarily to promote *education*, so that no child shall be debarred merely by lack of food, from receiving proper benefit from the State system of Public Education.(4) that it should also serve as a means of inculcating the principle of good behaviour during meals, and as an object lesson of the advantages of a plain but wholesome dietary, to which one might add the importance of the observance of regular times for taking food.

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(2) Annual Report, School Medical Officer, Stoke-on-Trent, 1912.

(3) Annual Reports, Chief Medical Officer, Board of Education, 1910-11-12.

(4) Education (Provision of Meals) Act, section 3.

The organisation of such an undertaking as the provision of school meals in a town of the size of Stoke-on-Trent is by no means an easy matter, and can only reach perfection by a steady and more or less slow process of evolution. Considerable progress has, however, been made during the past year, and the local administration of the Act is now being gradually shaped in accordance with the policy of the Board.

The whole question has been most carefully considered by the Medical Inspection Sub-Committee at no less than six distinct sessions, one of which was specially appointed for the purpose, and the present stage of affairs may be described as follows :—

(1) The School Medical Officer has drawn up a dietary which has been approved by the Education Committee.

(2) The principle of placing children on the feeding list who have been recommended by the School Medical Staff on account of their physical condition has been accepted.

(3) The food, mode of preparation and feeding centres have been periodically inspected by the School Medical Staff.

The children were fed during the greater part of the year at 18 centres. These, with one exception, were all local restaurants and the nature of the food provided was left entirely in the hands of the proprietors. When the question of supervision over dietry was gone into, it transpired that with such a large number of centres, the number of children attending at many individual ones was so small that the caterers could not see their way to conform to a prescribed menu. The number has, consequently, since been gradually reduced to 12. In one instance the food is conveyed from one of these restaurants to a school.

Up to two years ago, Burslem children were fed at the Wedgwood Institute, where the catering was undertaken by the Local Authority. Under this system adequate supervision over the behaviour of the children was possible and was admirably carried out by the Attendance Officers and Teachers (five of the latter having given their services voluntarily each day in turn), tables were properly laid and grace sung by the children. The number of children attending having diminished, it was felt that insufficient were left to warrant the retention of the services of the cook, and the Burslem children have since been fed at other centres. The whole question of feeding centres is still under consideration.

Children have hitherto been placed on the feeding list on application to the Teachers, inquiries as to home circumstances carried out by the Attendance Officers.

The feeding registers have been kept at the schools.

No contribution has been received or asked for from any of the parents towards the cost of meals provided.

The following table indicates the facts ascertained by the Attendance Officers as the result of their enquiries :—

Table showing average weekly income per member of family of children attending school meals after deducting rent.

No. of inquiries made	Average weekly income per member of family after deducting rent				
	Under 1/-	1/- and under 2/-	2/- and under 3/-	3/- and under 4/-	4/- and upwards
248	126	71	33	10	8

Table indicating other home circumstances and general conditions of the family.

No. of cases	Circumstances of father				Parents living apart	Mother goes to work	Character of family					
	Out of work	Working short time	Sick or disabled	Dead			Good	Fair	Indifferent	Bad	In receipt of poor law relief	Not ascertained
248	115	12	51	16	2	19	104	56	6	12	36	70

Miss Dorothy Lindsay, as the result of an investigation carried out in the City of Glasgow, has shown, by ascertaining the amount of energy (expressed in calorics, *i.e.*, heat units) producible per penny expended in food, that "while the labouring classes with a regular income of over 20/- a week generally manage to secure a diet approaching the proper standard for active life, those with a smaller income and those with an irregular income entirely fail to get a supply of food sufficient for the proper development and growth of the body or for the maintenance of a capacity for active work." (5) Allowing 3/- or 4/- per week for rent, the average weekly income per member of a family consisting of husband, wife and four children, would amount to between two and three shillings.

A similar investigation is being carried out in this country under the auspices of the Ratan Tata Foundation for the Study of the Problems of Poverty, University of London, and a visit was paid to the Borough by Miss M. Buckley in connection with the matter in March last. No doubt a report will be issued in due course.

The question of the diet of the working classes is one of supreme interest and importance, for it is on the health and vigour of its labouring classes that the prosperity of a country ultimately depends.

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(5) Report upon a Study of the Diet of the Labouring Classes in the City of Glasgow. Dorothy E. Lindsay, B.Sc.

An additional reason for abandoning the exclusive use of the poverty test in the selection of children to be fed is afforded by the fact that there are a number of children who, on account of both parents going to work or for some other reason, bring their dinner to school with them, and that one has found that the kind of food they bring is almost invariably deficient in these very classes of food stuffs, namely proteids and fats, which are most essential to young growing children. It frequently consists solely of bread and jam, in other cases of dry toast and in others of cake; *i.e.*, largely of carbohydrates. It is quite an exception to find butter or other fatty matter added and, although in some instances additional proteid and even fatty matter is supplied in the form of hard boiled egg, cheese, cold bacon or brawn, this is an unusual occurrence.

The removal of the stigma of pauperism from children provided with school meals will enable such children to be properly provided for, and their parents will, in most instances, be only too glad to pay for the convenience. The question of the *educational* value of school meals, in so far as it concerns good behaviour and table manners, is a matter which has yet to be dealt with. As already indicated, it is closely connected with the question of centres, a matter already under consideration.

The local importance of this educational aspect of the Provision of Meals Act is greater than would appear at first sight. As I have already pointed out,(6) there are a certain number of children who never get proper meals at regular hours, but who ask for, or help themselves to various kinds of unsuitable food at all sorts of odd times. Even in instances in which a cooked mid-day meal is provided I have frequently observed children squatting about the room on low stools or turned up boxes, instead of sitting at the table, and eating out of old jam jars and all sorts of queer vessels often the reverse of clean. Little or no restraint is exercised, the food is "bolted," often with great greediness, and the children rush off directly their wants are satisfied. Such children do not dine, they feed. and their mode of feeding is most detrimental to their digestion and hence to their development. We now teach our children the proper way to breathe, and the provision of school meals affords an admirable opportunity of teaching them the proper way to eat.

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(6) Annual Report, School Medical Officer, Fenton, 1908.

With regard to the effect of school meals on the physical and mental condition of children fed, the medical staff has not yet been able to undertake systematic examination of all children, the dietary I submitted in my monthly report for September last is, however, the same as that which I drew up for use in the late Urban District of Fenton in the year 1910, when it was found that 71 per cent. of the children fed gained weight.(7) Those who have been under observation as "specials" have also shown considerable improvement, provided that feeding has been continued for a reasonable length of time. Several Head Teachers have also remarked on the very manifest improvement both physically and mentally of children fed in 1911 during the time of the coal strike, and others have noticed similar improvement in those fed this year.(8)

Other details with regard to the administration of the Act will be supplied in the official return to the Board of Education at the end of the financial year ending March 31st, 1914.

Physical Exercises and School Games.

The opinion expressed by many and corroborated, on the whole, by the findings of the series of Commissions dating from 1902-1905.(1) that a certain amount of national physical deterioration had set in, that this was of comparatively recent date and confined, almost entirely, to the working classes, rendered the adoption of a national system of physical education imperative.

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(7) Annual Report. School Medical Officer, Fenton, 1910.

(8) *e.g.*, Mr. Garner, Head Master Eastwood Vale Boys' School, writes: "The recipients have benefited physically and are better able to receive instruction. I have several boys I should like to feed, not because they go short, but because of insufficient variety; bread only, week in and week out."

(1) Reports of Inter-Departmental Committee, Employment of School Children, 1902. Royal Commission Physical Training (Scotland) 1903. Inter-Departmental Committee, Physical Deterioration, 1904. Inter-Departmental Committee, Medical Inspection and Feeding of Children attending Public Elementary Schools, 1905.

The matter was, consequently, taken up by the Board of Education, who, in 1904, issued a special syllabus of physical exercises, followed by a revised edition in 1909, in which year also the duty of supervising physical training was placed in the hands of its Medical Department, and the services of expert Inspectors engaged.

The purposes these exercises are intended to fulfil may be classified primarily into two groups:—

(1) Promotion of general physical development and of education.

(2) Correction of faulty conditions.

The exercises contained in the Board's syllabus are based on the Swedish model, are selected to suit children of from 7—14 years of age, and are intended to be employed on a progressive system. Notes as to the best methods of carrying out physical training in Infants' Departments are added in an appendix,(2) and skipping exercises, organised games and dance steps included.

Although such modifications of the Swedish system have been introduced into the syllabus as to reduce the possibility of strain to a minimum, and therefore render possible its extension even to weakly children, there must always remain a certain number whose physical condition is such that they are unfit to participate in this form of instruction either wholly or in part.

Teachers should therefore exercise constant vigilance, and exclude any child from physical exercises who shows signs of abnormal reaction, until the opinion of the School Medical Officer can be obtained as to its fitness for them.

The number of instances, apart from defective conditions detected at routine medical inspection, in which either my medical colleagues or myself have been consulted on this question are so few as to cause some doubt as to whether this matter is receiving adequate recognition.

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(2) Board of Education Syllabus, Physical Exercises for Schools. Appendix C. 1909.

The points to which teachers should pay special attention will be found on page 15 of the Board's syllabus, and are as follows :—

(1) Undue breathlessness.
(2) Signs of early general fatigue.
(3) Pallor.
(4) Fainting.

On the other hand, the idea seems to be prevalent that the mere fact that a child is known to be suffering from any form of heart disease is, of itself, a sufficient indication that it is unfit to take part in these exercises. This is by no means the case; indeed, there are many such children to whom they are distinctly beneficial. All such cases should, of course, be referred to the School Medical Officer.

The names of children who are unfit either to join in the exercises at all, or to whom certain movements, such as trunk bending, skipping or jumping would be harmful, have been entered on Medical Form C.(3) Full particulars have also been added as to the special movements which should be omitted.

The number of children excluded from all forms of physical exercises amounted to 17, and the number excluded from the practice of certain movements to 45.

In addition to the promotion of physical development, the practice of physical exercises is of very high educational value, and the opinion expressed by various authorities on pedagogy as to the need for securing promptness, precision and co-ordination of muscular movements in response to varying forms of sensory stimulation are amply corroborated by those of psychiatrists as to the extent to which motor elements enter into mental life. Thus, Dr. Maudesley suggests that "the old saying, *nihil est in intellectu quod non prius fuerit in sensu* might perhaps, not unfitly be supplemented, not by the witty *nisi ipse intellectus*, but by *et in motu*,"(4) while Dr. Bevan Lewis attributes the condition of apathy and inaction, accompanying certain morbid mental states, as another instance of failure of the "muscular element of thought" previously alluded to in another section.(5)

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(3) Medical Form C consists of a card divided in columns in which are entered the names of all children found to be defective at medical inspection, together with the nature of the defect and directions to parents and teachers as to treatment and general management.

Loss of power to perform certain actions through failure of those nascent representative motor excitations which form the basis of the idea of the act about to be performed, is well known to modern psychiatry and is termed "apraxia."

One of the groups of tests one employs in estimating a child's mental capacity is that concerned with its power of formation and storage of motor ideas.(6) These, one investigates by ascertaining the reaction of its motor mechanism by imitation and to word of command with regard to both simple and complex actions, and its power of motor control is estimated in the same way.

One of the signs of fatigue during physical exercises, which should be carefully watched for by the teachers, consists of failure in precision by the addition of superfluous movements. These superfluous movements are frequently met with, apart from fatigue, in mentally defective children, and are associated with failure of power of attention and of the faculty of co-ordinated and logical thinking.(7)

The conception of the Board of Education with regard to a national system of physical training for school children is officially given as comprising(8):—

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(4) Maudesley. Journal of Mental Science, Jan., 1913, Mental Organisation.

(5) Page 26 of present report.

(6) Special Schedule of Medical Inspection of Mental or Moral Deviates. Page 40 present report.

(7) School Medical Officer, County Borough of Stoke-on-Trent. Report on the subject of Feeble-minded and Epileptic Children, with special reference to the recommendations of the Royal Commission on the Care and Control of the Feeble-minded, 1912

(8) Chief Medical Officer, Board of Education. Annual Report, 1912, Section XV.

(1) The adoption of the Swedish system.

(2) The issue of an official syllabus for use in Schools.

(3) The training and examination of teachers in the use of this syllabus.

(4) Inspection by the Board of Education of the work carried out in Public Elementary and Secondary Schools.

With regard to (3), the course on physical training and hygiene having but recently been made compulsory in training colleges, the establishment of evening classes and holiday courses is necessary for the benefit of many existing teachers.

Such evening classes were established in the Borough this year for the first time, but the course includes women only. It would seem, therefore, that the importance of the subject is not appreciated by the men.

The Board's syllabus is now adhered to throughout the Borough, organised indoor games are taught in all Infants' Departments, while games are encouraged among the senior boys, and a School Football League has been formed.

Head Teachers interested in the subject would render valuable service by taking the chest measurements of a number of children of varying ages before and after a course of physical exercises. The maximum chest girth on inspiration and on expiration should be taken and the one deducted from the other.

Many minor faulty conditions will be corrected during the ordinary school course. The correction of more serious abnormalities may be attempted in two ways :—

(1) By paying special attention to such movements contained in the Board's Syllabus as are calculated to remedy the defect.

(2) By the addition of special exercises not included in the Board's Syllabus.

The names of all children exhibiting abnormal conditions have been entered on Medical Form C, together with the nature of the defect and the movements to which it is desired that special attention be given. The mother has also been interviewed. whenever possible, the child made to perform the required movements before her and instruction given on points of special importance. She has then been asked to see that the child practices these movements at home as well as at school. In instances in which it has been impossible to secure the attendance of the mother. full written directions have been sent.

Head Teachers have inquired, from time to time. as to whether these directions are being carried out and the effects of such exercises have been noted by the Medical Officer during the course of subsequent visits to the school.

The following table indicates results obtained :—

Table indicating results obtained through the employment of certain specific exercises selected from those contained in the syllabus of the Board of Education.

Condition for which special exercises were ordered	Result obtained from the practice of such exercises			Total
	Cured	Improved	Condition unaltered	
Mouth breathing (including enlarged tonsils and adenoids)	20	62	88	170
Heart affections	4	19	13	36
Spinal curvature and maldevelopment of chest ...	—	4	3	7
Flat foot	10	4	16	30
Total	34	89	120	243

The figures referring to spinal curvature indicate deformities of medium degree. Those of minor degree would be corrected by the ordinary school course, while those of serious degree would require special treatment.

The treatment of the varying kinds and degrees of deformity for which special attention to specific syllabus exercises is insufficient, would necessitate the establishment of an orthopœdic department at the school clinic. This we are not yet in a position to undertake.

At present only five school clinics in the country appear to possess one, viz. :—Deptford, Dunfermline, Woolwich, Bradford and Brighton.(9)

The Dunfermline clinic has been in existence for six years, and is furnished with a complete outfit of medical gymnastic apparatus of the Swedish type.

School Baths and Bathing.

The subject of school baths and bathing may be viewed from two aspects —

(1) As a means of securing cleanliness.
(2) As a means of promoting education.

To a certain extent, these two divisions of the subject overlap. Thus the school shower bath may be regarded both as a means of cleansing and as an educationel agent for forming habits of cleanliness and self respect, to which may be added its therapeutical value of bracing up the system generally and so rendering the child more alert and hence more capable of profiting from the education provided.

Instruction in swimming, though intended as an educational measure, is also indirectly a means of securing cleanliness, through the fact that any who are unclean are compelled to have a preliminary bath before they are allowed to enter the swimming bath.

As the question of shower bath installation arises mostly in connection with the building of new schools, and as the locality in which the proposed new council school is to be erected is not one in which special facilities for securing cleanliness appear to me to be necessary, I have not advised the inclusion of one in the plans.

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(9) Cruickshank & Mackenzie, School Clinics, 1913.

A special Sub-Committee was appointed in November last to consider the question of a Cleansing Scheme under Section 122 of the Children's Act, and though school baths are distinct from cleansing stations, the question of their installation in connection with certain existing schools may possibly arise.

In the meantime provision has been made at the new school clinic for cleansing dirty and verminous heads, and in most instances, cleanliness of hands and faces is insisted on and full use made of school lavatory basins, though one met with one instance during the year in which these were not used at all.

Swimming instruction is given to the boys and girls of all senior departments by a staff of qualified instructors. The lessons are given once a week from May to September, each class consisting of 40 pupils in the case of the boys and 20 in the case of the girls.

Beyond giving directions for the exclusion of certain children from swimming instruction on medical grounds, who have been examined either as leavers or as special cases presented by the teachers, the medical staff has not yet been able to find time to exercise any supervision over this matter. An ideal arrangement would include medical examination of all children before commencing the course, with a view to the exclusion of any who, from heart trouble, lung disease or nervous disorder, would be liable to sudden collapse in the water or to whom swimming would entail undue strain, as well as any who, by reason of purulent discharges or tuberculous sputum, would be a source of infection.(1)

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(1) Graham Forbes, School Hygiene, May, 1912. "The Pollution of Swimming Baths" Dr. Forbes quotes the Bradford Sanitary Association's 29th Annual Report, as describing the condition of the water in swimming baths after one day's use as "often no better than dilute sewage."

As the total number instructed during the year amounted to 6,103, it is quite impossible to examine all with our existing staff, though a certain number have been examined as leavers.

The average age of the pupils is about 11 years, so that the inclusion of the 8 to 9 year old group among routines required by the Board of Education on and after April 1st, 1915, will not affect the question.

Another ideal provision would be the presence of a medical officer occasionally during swimming instruction. This also I have been hitherto unable to arrange.

The number of children excluded from swimming instruction by the Medical Officers amounted to 30.

Supervision of School Buildings.

The duty of inspecting school premises was, in the first instance allotted to the School Medical Officer only.(1) As pointed out, however, in my annual report for 1912, this part of the work, to be effective, should include provisions for constant medical supervision over all school arrangements affecting the health and development of the children, and as this involves more frequent visits to individual departments than can possibly be paid by any one official, I there suggested that the two Assistant Medical Officers should be asked to share this duty with me by ascertaining, during the course of their visits in connection with ordinary routine inspection of school children, such matters as the condition of latrines, whether the best use was being made of existing means of ventilation, the arrangement of desks with regard to securing the best position with reference to lighting, condition of lavatories and towels, facilities of access to a supply of pure drinking water, facilities for drying wet boots and cloaks and kindred matters. This suggestion was adopted, and the results of such inquiries have been included in my monthly reports, all matters requiring immediate attention having been reported at once to the School Architect.

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(1) Duties of School Medical Officer. Number 12.

It is impossible to estimate the full beneficial effects of such work by means of statistical figures, for, as pointed out by the Board of Education,(2) the School Medical Staff must be regarded, from this point of view, not so much as so many officials "charged with specific duties, as a pervading influence on the minds of teachers, parents and children alike, asking for more hygienic conditions in the school and in the home."

The matters officially reported to the Local Authority, however, amounted to 20 in number, involving 16 schools, and had reference to the following:—

Ventilation 3 instances, lighting 4, heating 1, uncleanliness 2, school convenience 6, school structure 1, playground in connection with the holding of playground classes 1, water supply 1, and drainage 1.

Six of these matters have already been remedied, 7 are being attended to, 1 has been partially remedied, 4 have been referred to School Managers, while 2, involving certain alterations in school structure, and which are not urgent, will be considered in conjunction with the estimates for the year 1914.

Generally speaking, our schools compare very favourably with those of other localities—33 are of the central hall, lateral hall or marching corridor type, all are supplied with water by the Staffordshire Potteries Waterworks Company, and all latrines are on the water carriage system. There are, however, here, as elsewhere, a certain number of schools of a more or less obsolete type, and in 5 instances, all of them Non-Provided Schools, the alterations necessary to fulfil recent requirements on the part of the Board of Education are such as to raise the question of the desirability of replacing these by schools of more modern construction.

That this question should have arisen at the present time is most unfortunate. Some years ago the central hall type of school was regarded as the ideal one; more recently, however, so many of its defects have become manifest that it is no longer regarded with favour, and, although there is no doubt that the increasing amount of recognition given to school architecture as a highly specialised branch of the whole subject, and the consequent increased amount of attention paid to it, will result in the evolution, in the near future, of a type of school which will give general satisfaction, at the present time no such type can be said to exist. While, therefore, every new school constructed represents one stage further in the advance of school architecture, the simultaneous erection of several new schools in the same locality involves a multiplication of buildings of practically the same type in place of a progressive evolution approaching nearer and nearer to perfection as each school is built.

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(2) Circular 596. Board of Education. "Arrangements for attending to the Health and Physical Condition of School Children."

The work of school architecture having become such a highly specialised branch of the architect's profession, it would greatly benefit the cause of school hygiene if the services of School Architects employed by Local Authorities could be engaged in designing new non-provided schools as well as those built by Local Authorities.

The Control of Infectious Disease in Schools.

Full details with regard to arrangements made for co-operation with the Sanitary Department in connection with this matter were given in my annual report for the year 1912,(1) and need not be repeated. Broadly speaking, infectious diseases scheduled in the Infectious Disease Notification Act are dealt with by the Medical Officer of Health, and the remainder by the School Medical Officer, provision being made for exchange of information.

Cases of infectious disease not scheduled in the Act are notified to the School Medical Officer by Head Teachers, Attendance Officers and School Nurses, special post card forms having been provided for the notification of first cases of measles.

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(1) Annual Report of School Medical Officer, Stoke-on-Trent, 1912, pp. 6-8.

The total number of cases notified to the School Medical Officer amounted to 4,222, details as to disease and age distribution being contained in the following table. For figures connected with scarlet fever, diphtheria, enteric fever, erysipelas and phthisis, I am indebted to the Medical Officer of Health.

Notifications of infectious disease of children attending Public Elementary Schools during the year 1913.

Diseases	No. of Cases notified	Ages									
		4 & under 5	5 & under 6	6 & under 7	7 & under 8	8 & under 9	9 & under 10	10 & under 11	11 & under 12	12 & under 13	13 & under 14
Measles	2624	503	1345	502	109	80	24	30	16	11	4
Whooping Cough ...	603	199	269	87	28	10	2	2	5	—	1
Chicken Pox ...	425	87	188	88	38	12	3	5	2	—	—
Mumps	478	56	150	123	57	35	22	15	15	4	1
Catarrhal conjunctivitis ...	147	18	38	18	11	17	7	11	7	12	8

Diseases	No. of Cases notified	Ages
		5 to 15
Scarlet Fever	162	162
Diphtheria	337	337
Enteric Fever	33	33
Erysipelas	10	10
Phthisis	202	202

With regard to the exclusion of individual children from school on account of infectious disease, the rules contained in the Joint Memorandum of the Local Government Board and the Board of Education (2) have been strictly enforced.

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(2) Memorandum on Closure and Exclusion from School, 1909.

Closure of Schools.

In cases of short early closure in connection with threatened outbreaks of measles, the Medical Officer of Health has been at once informed of the fact, while all cases of closure of longer duration have been advised, either at the suggestion of the Medical Officer of Health or after consultation with him.

In order to distinguish between the two kinds of closure, the latter will be alluded to as "long closure"; the following statement containing particulars with regard to both :—

1—Long Closure.

Disease.	School or Department Closed.	Period of Closure.
Diphtheria	Queen Street (whole school)	July 18th to end of Summer Holidays, August 25th.
Diphtheria	Queen Street Infants Department	September 29th to October 20th.
Diphtheria	Cooke Street Girls' and Infants' Department	March 3rd to end of Easter Holidays, March 31st.
Whooping cough	St. James' C.E. Infants' Department	March 3rd to end of Easter Holidays March 31st.
Measles	Edensor C.E. Infants' Department	Commencement of Whitsuntide holidays, May 9th to June 9th.
Measles	All Infants' Departments of the Burslem District, five of the Hanley, one of the Stoke and four of the Fenton Districts. Total 24 Departments.	July 15th to end of summer holidays, August 25th.
Catarrhal conjunctivitis	Longton High Street Infants' Department	December 15th to end of year.

It will be observed that in twenty-nine instances the closure consisted of an extension of the ordinary school holidays.

2—Short Early Closure.

Closure for a period of five days, nine days after the date of sickening of the first case in a Department, was carried out in 38 instances, in connection with threatened outbreaks of measles.

Although the Joint Memorandum above referred to recommends the restriction of short early closure to single classrooms, peculiarities of school structure and arrangements, involving free intermingling of children of different classes, rendered necessary its extension to whole Infants' Departments in twenty-eight instances.

Measles.

Infectious diseases scheduled in the Notification Act being dealt with almost entirely by the Medical Officer of Health, those with which I am chiefly concerned are measles, whooping cough, chicken-pox, mumps and catarrhal conjunctivitis, the most important of these being measles.

The total number of cases of measles notified was 2,624, and the number of deaths, 42.

Alternating years of high and low incidence is characteristic of measles,(3) and the year 1913 must be considered as a typical "measles year." Cases began to occur in fair numbers towards the middle of March, reaching a maximum at the end of the first week in July, the highest incidence coinciding with the age period 5—6, at which age 1,345 children were infected, and the next highest the age period 4—5, at which the number was 503. The following table compiled from statistics contained in the latest published Annual Report of the Registrar-General,(3) indicates the age periods of greatest danger taking the country as a whole :—

Table showing deaths from measles at different ages throughout England and Wales during the year 1911 (compiled from statistics contained in the Annual Report of the Registrar General).

	Ages at death						
	0—	1—	2—	3—	4—	5—	10—15
All causes	11466	31395	11555	6919	4701	12668	7210
Measles	2785	5310	2189	1153	631	926	57
Percentage of deaths from measles to deaths from all causes ...	2·4	1·7	18·9	16·9	13·4	7·3	0·7

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(3) Seventy-fourth Annual Report of the Registrar-General 1911.

Thus the highest mortality from measles is seen at the age 1—2, while the percentage of deaths from measles to deaths from all causes reached its maximum at the age period 2—3, rapidly declining in both instances as age advances, until from ten years of age and upwards the mortality is insignificant. The period of highest mortality, therefore, is a period prior to the age of compulsory school attendance. There are, however, 3,079 children between 4 and 5 years of age attending the schools of the County Borough, that is of an age when the percentage of deaths from measles to deaths from all causes is still as high as 13 per cent. The ages of highest mortality may also be taken as the ages at which permanent sequelæ are most likely to occur, and affords an additional reason why the greatest possible care should be taken of children of these ages, and every endeavour made to postpone the date of attack to a safer period.

The only means of securing this postponement consists in excluding these children from likely sources of infection. In the case of school children these sources are twofold, home and school ; and, unlike scarlet fever and diphtheria, measles seems to be spread to a greater extent through infection contracted at school,(4) and, moreover, is highly infectious before the distinctive rash appears, and hence the exclusion of all infected children from school becomes a matter of the greatest difficulty. This difficulty can be obviated to some extent by a daily inspection of all children of an infected classroom and the exclusion of any showing signs of being in the initial stage. Although several of our head teachers are fully acquainted with initial signs, some being even able to detect the early presence of Koplik's spots, and although in two instances the occurrence of an epidemic throughout a class was undoubtedly checked in this way, it is doubtful if sufficient vigilance is either available or possible to render this method reliable generally.

At the end of the Whitsuntide holidays, a special circular was sent to all Head Teachers, drawing attention to this aspect of the question and also to the importance of playground classes in infected localities; none of the methods suggested, however, appeared to check the spread of the disease to any great extent.

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(4) Control of Measles in Schools, James Kerr, M.A., M.D., D.P.H., "Schoo Hygiene," August, 1913.

The whole question of the Control of Measles in Schools was fully discussed at a meeting of the Medical Officers of Schools Association, on May 9th last, and a short summary of the opinions expressed was compiled from the report in the Journal of the Association(5) and presented to the Medical Inspection Sub-Committee in the form of an appendix to my own report for the months of July and August.

The question has often been raised as to whether school closure has any influence on the spread of measles in populous districts, and, with a view to throwing light on this matter, charts have been prepared by School Medical Officers showing holiday influence on the incidence and death rates.

As the notification of measles by Head Teachers and others was only commenced throughout the whole Borough in 1912, and, as was expected, some time elapsed before all grasped its importance, and consequently some cases occurred at the earlier parts of that year which escaped notification altogether, complete figures are available for the year 1913 only. The accompanying chart, therefore, indicating holiday influence on incidence and deaths is restricted to cases which have occurred during 1913.

For information concerning the deaths I am indebted to the Medical Officer of Health.

In studying this chart it must be remembered that, during closure or holiday time, all notification by Head Teachers and others ceases, and that during the first week after re-opening, the number includes all additional measles cases absent from school at that date. Thus, for the first week after the Easter holidays, the number continues to increase, for it includes those

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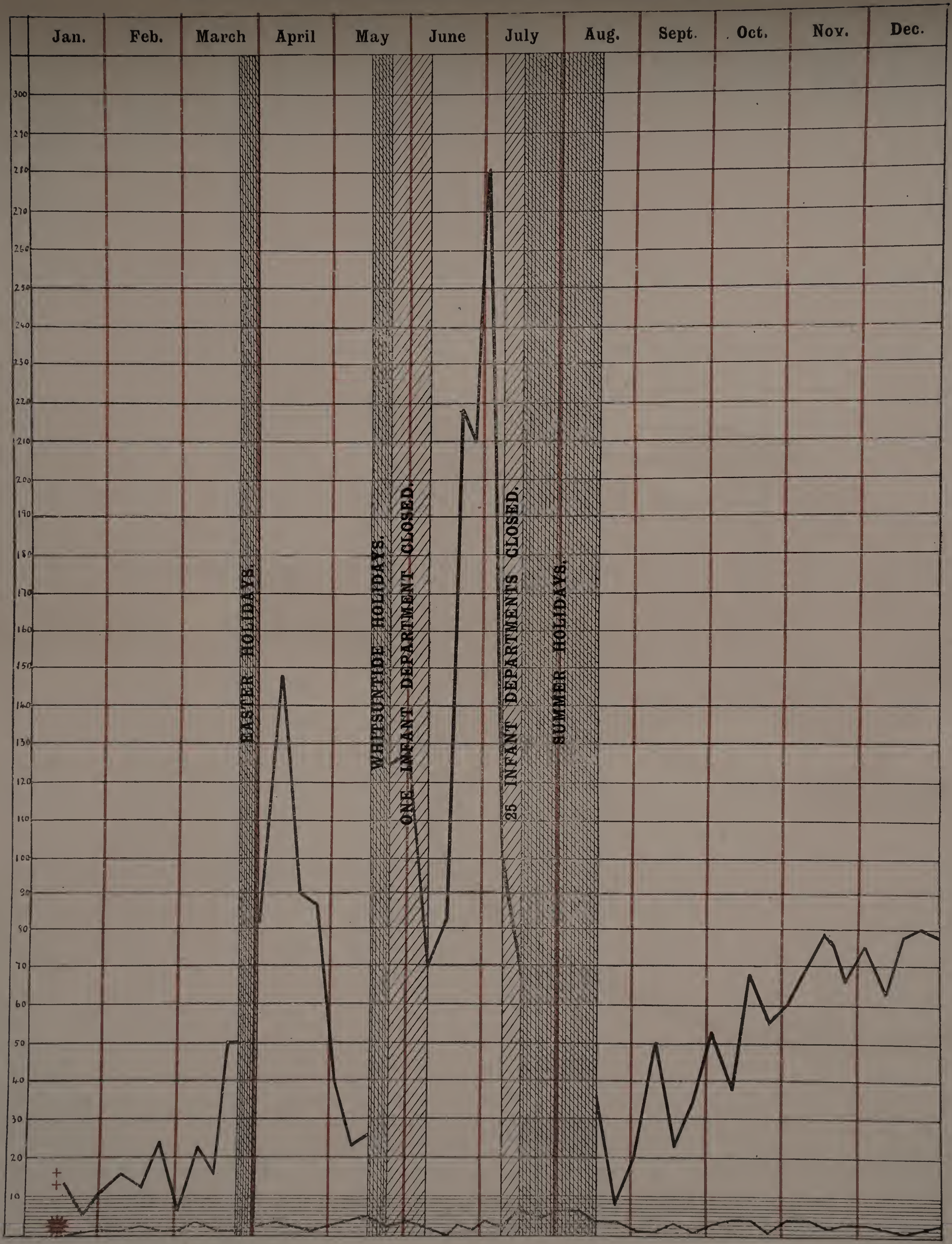
(5) "School Hygiene," August, 1913.

Chart showing holiday influence upon Outbreaks of Measles.



‡ Number of cases of Measles notified weekly.

✱ Number of deaths from Measles notified weekly.

additional cases which, though infected before closure, have definitely developed measles during the closure period, whereas from this point onwards the number rapidly declined, showing that closure during these holidays had considerable influence in checking the spread of the disease. In the case of the Whitsuntide holidays, the influence is less certain, as a whole department was closed until June 9th, and consequently un-notified cases may have been occurring. In the case of the summer holidays, the decline from the time the twenty-four Infants' Departments were closed is of no significance whatever, for the same reason, though the influence of this long closure is certainly indicated by the behaviour of the incidence curve from the termination of these holidays onwards.

The rise in the death curve during the summer holidays represents a certain number of deaths among children infected at an earlier date, most of the deaths from measles being due to broncho-pneumonia, a later complication; still, its persistent rise until almost the end cannot be altogether accounted for in this way.

In my annual report for 1912, its was shown that of the 13 instances in which short early closures was practised during that year, there was not a single one in which subsequent cases occurred, a little uncertainty was, however, introduced through absence of means of checking notification of first cases, and from the fact that in some instances Head Teachers had not realised that notification of all subsequent cases was necessary. There were, in fact, eight instances out of the 13 in which, according to the notification return, no subsequent cases occurred at all, either at home or after the return of the excluded children to school; thus rendering the original diagnosis of measles doubtful.(6) During 1913, the home of every child notified as a first case has been visited by one of the School Nurses and this source of error therefore eliminated as much as possible. The following table indicates the results obtained.

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(6) Annual Report of School Medical Officer, Stoke-on-Trent, 1912. pp. 13-16.

Results ascertained after short early closure in the case of threatened outbreaks of measles in Schools during the year 1913.

No. of instances in which short early closure was practised	No. of instances in which excluded children sickened at home during period of closure	No. of instances in which no further cases occurred either among excluded children or among children attending school subsequent to the date of re-opening	No. of instances in which cases occurred among children attending school after the date of re-opening, arranged accordingly to the time interval since that date.					No of instances in which children sickened at home during the period of closure, but in which no further cases occurred among children attending school after the date of re-opening
			2 weeks	3 weeks	1 month	2 months	Epidemic continuous in spite of short early closure	
38	33	5	5	5	7	6	5	5

The object of short early closure is to secure the exclusion of those unknown children infected by the first case, at a time prior to the appearance of the distinctive rash, when they are capable of infecting others. This "latent" measles should therefore become "manifest" at home during the period of closure, and those children in whose case it has thus become "manifest" will, of course, continue to remain at home together with any other children of the same household, whereas, the remainder, who are free from any signs of "manifest" measles may be regarded as having escaped infection, and hence may be safely re-admitted to school.

The surest indication of the success of this method, therefore, consists in the sickening at home of a certain number during the period of closure, coupled with the non-appearance of subsequent cases at school. This occurred in five instances and represents complete success. Instances in which no children sickened at home during the period of closure may be accounted for in two ways; there may have been an error in diagnosis with regard to the first case or there may have been a sufficient number of children in the infected classroom who are immune, to form an effective barrier against further spread. With regard to the first, every care was taken by means of inquiries made at the homes of the children to ascertain that all first cases reported were really cases of measles. but, considering that anomalous cases frequently occur. it is impossible to absolutely eliminate this source of error. With regard to the second. there are always a certain number of children in every class who are immune from attack, usually through having already had measles, and it is found that, as soon as this number reaches a certain proportion to the whole, no outbreak occurs.

The figures contained in the first four sub-columns of column 4 may be taken to indicate the more or less partial success of the measure. thus, in six instances no furthur cases occurred for a period of two months, and in seven none for a period of one month. The occurrance of subsequent cases is almost always due to the introduction of fresh infection from outside. and the success or failure of the measure depends almost entirely on the relative strength of school infection and infection from external sources; indeed, one has repeatedly found that in instances in which there are already a large number of cases of measles in the immediate vicinity of the school, short early closure is sure to fail; whereas, when the first case reported is also the first case in the neighbourhood, it is almost sure to succeed, provided that one's information as to the date of sickening is accurate and that closure is therefore carried out at the right time. Between these two extremes every gradation is met with; the smaller the number of cases in the neighbourhood the greater the interval of time before the school becomes re-infected, and *vice-versa*, until, given a sufficiently large number, the epidemic continues as though no closure had taken place.

The fact that a second source of infection has been introduced is generally an indication that further short closure is useless. Thus in two instances in which this was tried the epidemic continued as though no closure had taken place, notwithstanding that the interval between the introduction of infection exceeded a month in both cases.

Although none of the above-mentioned methods of checking the spread of measles in schools succeeds under all circumstances, still each has its appropriate place.

There remains another, and in the existing state of our knowledge, a more efficacious measure, not so much as regards checking the spread of epidemics as in diminishing the mortality and, what is almost as important, in preventing the onset of sequelæ, some of which exercise a crippling effect on the child for life.

This measure consists of home visiting by Health Visitors, School Nurses, or both, with a view to impressing on parents the necessity of calling in medical aid and to seeing that every necessary care and precaution is taken. Parents are apt to regard an attack of measles far to lightly. Many do not call in medical aid at all, while others wait until some serious complication has arisen. Dr. Thomas, Assistant Medical Officer, London County Council, advocates the establishment of a system whereby skilled medical aid and necessary help can be placed within reach of every household, however poor.(7)

A scheme worked on some such lines as these would undoubtedly prove of the greatest benefit. In so far as it would tend towards the prevention of physical defects occurring among school children, the question is one which concerns the Education Authority, whereas from all other points of view it is one with which the Sanitary Committee is mainly concerned. Possibly some arrangement might be arrived at as a result of the appointment of a special joint sub-committee. It is a matter which resolves itself mainly into a question of staff.

Medical Inspection in Secondary Schools.

Although not compulsory, there is a growing tendency to extend medical inspection to Secondary Schools, and the movement has received great encouragement from the Board of Education.

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(7) Control of Measles, "School Hygiene," August, 1913.

Considering the critical stage of life which scholars attending these schools are passing through, the advantage of making provisions, whereby they may share in the benefits connected with an organised school medical service, is obvious.

The age period of from fourteen to twenty-five years is known as the adolescent period, and is commonly divided into two parts, early and late; the former, comprising a period from fourteen to eighteen years, being further distinguished as the period of puberty, and the period immediately preceding this as the prebubertial period.

The whole period is characterised by most important developments, both physical and mental.

On the physical side there is a remarkable acceleration of general growth, commencing in the prebubertial period and extending to adult manhood and womanhood. This acceleration commences earlier in girls than in boys, and accounts for the superiority of the former over the latter as regards both height and weight at this age.(1) The increase in growth, although chiefly concerned with the bones, muscles and blood vascular system, is by no means confined to these, the development of a hitherto comparatively dormant instinct necessitates a corresponding development of the central nervous system. Even the special sense organs participate in this increased growth.

On the mental side remarkable developments are taking place in the affective and intellectual spheres. These, in the early adolescent stage, are lacking in precision and conscious power, and have yet to be co-ordinated and brought under effective control.

This acceleration of both growth and development is attended by a certain amount of rivalry between them, and is accompanied by a condition of both physical and mental instability which renders all parts of the organism particularly vulnerable. Thus, tuberculosis is especially common at this age, and, according to Sir William Gowers, epilepsy commences during the years 13-16 in at least a quarter of the total number of cases,(2) while the increased rate of growth of the eyeball sets up a special liability to myopia.(3)

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(1) Sandiford. Mental and Physical Life of School Children. The Psychology of Puberty and Adolescence. Annual Report, Chief Medical Officer, Board of Education, 1912 Appendix II., Table IV., also Height and Weight Tables in present report.

The nutritional disturbances of puberty and adolescence are proverbial, one is constantly hearing parents complain, for example, that such and such a child is outgrowing its strength, and having regard to the part to be taken later on by woman in the process of reproduction, the strain is greater in girls than in boys. This is manifested, among other ways, in the peculiar liability of adolescent girls to become afflicted with chlorosis and other blood disorders, and, in the interests of the future welfare of the nation, is a factor demanding attention under any system of secondary education.

Many parents of girls attending our secondary schools have very limited means and are making great sacrifices in allowing their daughters to attend them at all. They are, therefore, most anxious that the most should be made of the opportunities afforded. It is consequently necessary that the greatest care be exercised that energy, which should be devoted to trophic purposes in connection with the reproductive function be not all used up in acquiring a number of scholastic attainments.

Sir Thomas Clouston writes with reference to these victims of "over-education,"(4) :—"If these young women marry they seldom have more than one or two children, and only puny ones at that, whom they cannot nurse, and who either die in youth or grow up to be feeble-minded folk" and very pertinently adds "why should we spoil a good mother by making an ordinary grammarian."

For similar reasons, marriage should be forbidden until the time of full maturity is reached.

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(2) Sir William Gowers. Allbutt's System of Medicine, Vol. VII., Epilepsy.

(3) Medical Officer, Aug. 10th, 1913 International Medical Congress, 1913. Causes of Myopia in School Children.

(4) Clouston. Mental Diseases. Insanities of Puberty and Adolescence.

Although it is rare for the mental instability characteristic of this age to manifest itself in the form of a definite breakdown until the later part of the adolescent period, the germs are there in the first,(5) and it is just at this time that judicious advice may do so much towards the prevention of more serious mischief; moreover, minor disturbances, especially of an emotional nature, are very common during puberty and adolescence.

The third decade, 20—30, represents the age period of greatest incidence of dementia præcox, a mental disease stated to contribute 25 per cent. of the asylum population.(6) The question of affording guidance to the developing sexual instinct is one which has attracted a considerable amount of public attention of recent years, and is one which, now that a Commission has been appointed on the subject of the Prevention of Venereal Disease, is likely to attract a considerable amount more. Many recommend a policy of "early direct enlightenment," and Drs. Iwan Bloch, Ernest Jones and others go so far as to say that this should be commenced in early infancy, especially in populous districts. The former gives a sort of syllabus from which a course of instruction suited to different ages may be compiled.(7)

There are others, on the other hand, who hold that public instruction on such matters given in Elementary Schools would only serve to bring about a premature development of sex through focussing attention upon it.

A great deal depends on the nature of the instruction given and on the manner of giving it. After bestowing a considerable amount of thought on the subject, I am strongly of opinion that any queries of a child as to its own origin, whether addressed to parents or teachers, should be answered truthfully; and that it should not be put off with silly fables, which it will not believe, and which will only have the effect of causing it to seek its information from very undesirable sources. I am also confident that a great deal of the harm done through children discussing such matters together in secret is considerably augmented by the mistaken action of certain of their elders of constantly drilling into their minds that everything connected with the subject is essentially and *per se* impure, and to be shunned by all right-minded people. If all young persons realised, before leaving school, that reproduction is a natural function, essential to the continuance of the race, and is not impure *per se* at all, but only *per accidens, i.e.*, by disregarding regulations concerning its exercise which are essential to the well-being of any civilized community, many subsequent "mistakes" of a deplorable nature might be avoided, and much sin too.

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(5) Hyslop, Mental Physiology. Factors of the Insanities.

(6) Both Stoddart and Tanzi give this percentage. Stoddart. Mind and its Disorders. Tanzi. Mental Diseases.

(7) Dr. Bloch's book is written for members of the medical, legal and teaching professions only, therefore its name is omitted from this reference.

Dr. Ernest Jones(8) states. as a result of his experience of psycho-analysis, that failure to appreciate this distinction has given rise in certain neurotic persons to "reaction formations" which have been responsible for unhappy marriages, and are one of the causes of the declining birthrate. To these one may add their influence in spreading venereal disease through temptations to unfaithfulness induced in the other party.

Whatever views are adopted towards the policy of early direct enlightenment, there can be no doubt as to the desirability of including sexology among the subjects in training colleges for teachers.

As matters stand, many abnormal indications are allowed to continue unchecked simply because their relationship with the developing sexual instinct is neither known nor suspected. How many, for example, have the slightest idea as to the real character of many of the acts of the typical school bully ? (9)

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(8) Psycho-analysis and Education, Journal of Education and Psychology, November, 1910.

(9) The real character of the school bully is admirably depicted in the person of Flashman in "Tom Brown's Schooldays," and shows a two-fold departure from the normal, one of which, if its evolution be allowed to continue unchecked, may end in the commission of a series of cattle maiming outrages such as recently occurred in this county, or in a series of murders such as occurred a few years ago in the East End of London.

In view of the light thrown on the matter by psycho-analysis, the aim to be kept in view should be one of "sublimation" (conversion from the sexual to the social spheres) rather than one of direct repression. Not only may direct repression have the opposite to the desired effect through counter suggestion,(10) but may even form the germs from which various forms of psychoneuroses may spring,(11) whereas by sublimation a character renowned for all the virtues may be built up out of the most uncompromising material.(12) Although he does not adopt Freudian phraseology, Dr. Bloch advocates much the same thing by drawing attention to the value of "sexual equivalents," under which he appears to include almost any form of motor activity.

I was also informed, on the occasion of my visit to the Darenth Industrial Colony last year, that the establishment of the workshops there had had a most beneficial effect on the patients in this respect. This affords an additional reason, if any be needed, for the establishment of such colonies instead of allowing a host of feeble-minded people to wander about at large with nothing to do.

There are three Secondary Schools in the Borough, the number on the rolls is 916, and the number of entrants during the year 285. Of these 284 came from the Public Elementary Schools, and will already have been examined among the code group of "leavers."

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(10) This is not so very uncommon in neurotic subjects, and one is always dealing with a mixed community in schools. Under the name of negativism, it forms one of the classical symptoms of dementia præcox. In many of these the sight of food calls up a counter suggestion, and the patient runs away from the table; at bedtime he then runs downstairs, and in the morning is unable to inhibit the counter suggestion sufficientiy to be able to get up.

(11) Section. School Clinic. Psycho-analysis.

(12) Havelock Ellis reviewing Freud's latest production "Das Intresse an der Psychoanalyse" in the Journal of Mental Science, of Jan., 1914, quotes him as saying;—Our highest virtues have arisen as reactionary formations and sublimations on the basis of our worst dispositions."

It is also well-known how "the fighter of boys may be transformed into the fighter of wrongs, and the collector of cigarettee cards into the collector of facts and how, on the other hand the maternal instinct may be so misdirected as to be wasted on cats, dogs and parrots." Quoted from Sandiford, Mental and Physical Life of School Children.

All that has been possible in addition during the present year has been the medical examination of exhibitioners and bursars.

The number examined amounted to 52. As the former may be regarded as entrants and the latter as forming part of an intermediate age group, the results have been tabulated separately. No conclusions can be drawn from such small numbers.

The school clinic should prove of great utility in dealing with special cases, and its psychiatric department should be of special service.

Arrangements should be made whereby Head Teachers of secondary schools may be furnished with the medical inspection cards of those examined as leavers from the elementary schools.

Number of exhibitioners and bursars Inspected.

	Exhibitioners					Bursars			Grand Total	Number of Re-exams.
Age ...	11	12	13	14	Total	16	17	Total		
Boys ...	1	6	4	2	13	9	1	10	23	12
Girls ...	1	10	9	8	28	22	3	25	53	26
Total ...	2	16	13	10	41	31	4	35	76	38

Notices of defects found were sent to the parents and all defective cases followed up. In every instance the defects were subsequently remedied.

Table showing Physical Condition of Exhibitioners and Bursars inspected.

Condition	Exhibitioners				Bursars			
	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.
CLEANLINESS OF HEAD—								
Clean *i.e.* no nits or pediculi ...	13	25	38	93	10	22	32	91
Nits only	—	3	3	7	—	3	3	9
Pediculi	—	—	—	—	—	—	—	—
NUTRITION—								
Excellent	3	15	18	44	2	22	24	68
Normal	9	8	17	41	8	2	10	29
Below normal	1	5	6	15	—	1	1	3
Bad	—	—	—	—	—	—	—	—
NOSE AND THROAT—								
No defect	12	24	36	88	10	24	34	97
Tonsils slightly enlarged ...	1	4	5	12	—	1	1	3
TEETH—								
Sound	6	22	28	68	5	22	27	78
Less than four decayed ...	4	6	10	25	2	2	4	11
More than four decayed ...	3	—	3	7	3	1	4	11
Sepsis	4	—	4	10	3	—	3	8
HEART AND CIRCULATION—								
No disease	13	28	41	100	9	24	33	94
Organic disease	—	—	—	—	—	—	—	—
Functional disease	—	—	—	—	1	1	2	6
Anæmia	1	1	2	5	—	1	1	3
DEFORMITIES—								
No deformity	13	27	40	98	10	25	35	100
Deformity present	—	1	1	2	—	—	—	—
VISION—								
6/6 each eye (normal vision) ...	10	13	23	56	4	14	18	51
6/6 R.	11	13	24	58	6	16	22	63
L.	9	13	22	54	4	13	17	50
6/9 R.	1	7	8	19	3	6	9	26
L.	2	4	6	15	3	3	6	17
6/12 R.	—	1	1	2	1	1	2	6
L.	1	5	6	15	—	4	4	11
6/18 R.	—	—	—	—	—	1	1	3
L.	—	1	1	2	—	3	3	8
6/24 R.	—	3	3	7	—	1	1	3
L.	—	4	4	10	—	—	—	—
6/36 R.	—	1	1	2	1	—	1	3
L.	—	—	—	—	—	—	—	—
6/60 R.	1	—	1	2	—	1	1	3
L.	1	—	1	2	—	—	—	—
6/0 R.	—	—	—	—	—	—	—	—
L.	—	—	—	—	—	—	—	—
GOITRE—								
No goitre	13	27	40	98	6	22	28	80
Slight goitre	—	1	1	2	4	3	7	20

Teaching of Hygiene to Teachers and Scholars.

The subject of hygiene is taught in the preliminary evening schools, a more advanced course in one of the technical schools, and in practically all the public elementary schools of the Borough.

In his report for the year 1910,(1) Sir George Newman points out that the teaching of hygiene, both in training colleges and schools, should aim at being simple and practical rather than theoretical and technical, and in the case of children attending the public elementary schools, should be mainly concerned with the formation of healthy habits.

For this purpose the value of practical demonstration over the use of a reader is insisted on, and commendation is given to the practice, in some localities, of "tooth-brush and handkerchief drill." One had special opportunities of coming into touch with this work during "Health Week" when 54 departments were specially visited by the Medical Staff, and addresses given to the children on health subjects. In my own case "friendly talks" were substituted for formal addresses, and I was much struck by the amount of knowledge shown by the children, especially on such practical points as the cleansing and care of the teeth, the evils liable to result to others by the insanitary habit of spitting in public places, the use of the handkerchief, the importance of regular and a sufficient number of hours of sleep, the health-giving properties of fresh air and so forth. Many children of both sexes had apparently already acquired the habit of sleeping with the bedroom window open, and I was particularly struck with the amount of care bestowed on the teeth by children from the Cottage Homes.

Possibly more might be done in the way of inculcating healthy habits by means of tooth-brush and handkerchief drill, and a preliminary clearing of the nose should be insisted on, as a matter of routine, in all cases, before commencing breathing exercises.

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(1) Section XII. "The Teaching of Hygiene and Physical Exercises."

Medical Inspection and Juvenile Employment.

The first official recommendations on the part of the Board of Education in connection with the question of extending the sphere of influence of the School Medical Service to Juvenile Employment were contained in the Annual Report of its Chief Medical Officer for the year 1911,(1) which was followed, almost immediately, by the issue of Circular 813.(2)

The object the Board had in view was to co-ordinate the work of regulating the employment of young persons set up by the long series of Factory Acts from 1802 to 1911 on the one hand, and the series of Education Acts, beginning with that of 1870 on the other, and to extend its usefulness by insuring that none shall be employed in work for which they are physically or mentally unfit. "Boys and girls are being spoilt physically, mentally and morally by their too early emergence into the ranks of the employed, by lack of guidance in the choice of occupations, by inadequate opportunities of skilled training and by insufficient safeguarding and husbanding of their physical powers and resources." (3)

The general policy recommended by the Board is as follows:—

(1) The adoption of the Education (Choice of Employment) Act, 1910, and the establishment of a Juvenile Employment Committee.

(2) Provisions for co-ordinating the work of this Committee with that of the School Medical Service.

(3) Provisions for supervision of children unfit for employment.

With regard to (1):—Both the Board of Trade and the Board of Education in a Joint Memorandum advise the adoption of the Education (Choice of Employment) Act, in preference to giving assistance under the Labour Exchanges Act.

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(1) Annual Report, Chief Medical Officer, Board of Education, 1911. Section XIII.

(2) "Records of Medical Inspection of Children leaving Public Elementary Schools."

(3) Annual Report, Chief Medical Officer, Board of Education 1911 Section XIII. Page 247.

With regard to (2):—Four different ways are pointed out by which the School Medical Officer can be of service.

(a) By adequate inspection of "leavers."

(b) By medical inspection of all employed school children.

(c) By medical inspection of children over 14 years of age. This in our own case means inspection of children attending Secondary Schools.

(d) By placing the results of such medical inspection at the service of the Juvenile Employment Committee.

With regard to (3):—It is recommended that arrangements be made whereby confidential information may be supplied to the Juvenile Employment Committee by Certifying Factory Surgeons as to children rejected by them on medical grounds with a view to the Committee advising parents on the subject of suitable employment and to securing medical treatment and care in cases in which this is indicated. A short time prior to my taking office, the Director of Education drew up a scheme bearing on this matter for the consideration of the Local Authority but no definite conclusion was arrived at and no action taken

No Advisory Committee has been formed in the Borough under the Labour Exchanges Act and the Education (Employment of Children) Act has not been adopted.

Although I thought it better to wait until my Department was thoroughly organised and in full working order before submitting any definite recommendations, I have always had the matter in view and the way towards the formation of a definite organisation has already been prepared to a considerable extent. During the past year all children entitled to leave school on or before July 31st, 1914, that is six months in advance of the end of the calendar year, have been medically inspected so that time might be allowed for adequate following up and after-supervision, inquiries have been made in every case as regard the nature of employment contemplated on leaving school and advice given, all cases found to be physically unfit for certain kinds of employment have been entered an Medical Form "C,"(4) and arrangements have been made at the office whereby the medical inspection record cards of all leavers have been classified and filed in such a way that that of any given child can be found at a moment's notice.

The systematic inspection of all children employed out of school hours has not yet been undertaken, but a number have been actually inspected among the "leavers," and strongly-worded written notices sent to the parents in the case of any showing signs of over-strain.

I am pleased to say that there are no "half-timers" in the Borough at the present time.

Having regard to the great practical utility of this branch of school hygiene, I think the time has now come for embarking more seriously on this work, and therefore beg to recommend those items of policy of the Board of Education alluded to above, together with the following additional details :—

(1) That in order to minimise the possibility of any child about to leave school escaping medical inspection, the Head Attendance Officer be asked to make enquiries on this point in the case of every child applying for a labour certificate, any found not to have been medically examined to be reported forthwith to the School Medical Officer.

(2) That a register be kept at each school containing the names of all children employed out of school hours.

With regard to the examination of "leavers," the Board of Education directs that for the future all children of twelve years of age, together with all of thirteen years of age who have not previously been medically examined, shall be included.

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(4) Medical Form C contains the names of all children found defective at medical inspection, the nature of the defect, the advice given and the results of "following-up."

The School Medical Staff is now in a position to undertake the medical inspection of all children employed out of school hours.

Schools for Mothers and Medical Supervision of Children under School Age.

The Chief Medical Officer of the Board of Education first drew the attention of Local Authorities to the subject of "mothercraft" in his annual report for the year 1911.(1) After stating that, while the School Medical Service now organised throughout the country provides for continuous supervision of children of school age, there is no similar provision for younger children, and that they are, consequently, dependent on the care of mothers who, in many instances, lack sufficient practical knowledge of the ordinary rules of child hygiene to successfully fufil this duty; he continues by indicating certain methods by which the necessary knowledge may be supplied, and, in the report of the following year, how treatment may also be provided in cases where it is needed.

The methods indicated by which mothers may be supplied with the necessary knowledge are:—

(1) By instructing the mothers themselves.

(2) By instructing girls and young women who will be the mothers of the future.

The first is carried out in a number of localities by means of institutions known as "schools for mothers," and the second by means of instruction given:—

(a) To elder girls in Public Elementary Schools.

(b) To girls who have already left school by means of Continuation Classes.

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(1) Annual Report, Chief Medical Officer, Board of Education, 1911. Section XII.

The suggested means of providing medical treatment for children under school age in cases where it is not at present available, consists of an extension of the work connected with schools for mothers.

It is also suggested that, although Local Education Authorities have no power to provide a treatment clinic for such children, either separately or as part of a school clinic for older children, the linking up of the two treatment organisations would be of advantage.

There are at present four "Baby Welcomes" in the Borough, and the establishment of a fifth is contemplated.

The movement, as the outcome of which these "Baby Welcomes," which are practically the same as "Schools for Mothers," were established, was inaugurated and fostered by the untiring energy and enthusiasm of Mrs. Wedgwood, to whom I am indebted for information concerning them.

The four "Welcomes" or "Schools" are situated at Etruria; Paddock Street, Hanley; Burslem and Stoke; and a fifth will probably be established in Longton. The Burslem and Etruria "Welcomes" date from the year 1911, the other two being of quite recent origin. The Paddock Street "Welcome" is a branch of that situated at Etruria.

There is a Lady Superintendent, assisted by an Assistant Lady Superintendent at the Etruria "Welcome." Infant consultations are given partly by an honorary medical staff and partly by the Lady Assistant Medical Officer of Health. Provision is made for weighing the babies, and milk and virol is available for those needing them. Instruction is also given to mothers by means of "talks" and home visiting by a voluntary band of workers. There is a clothing club in connection with the Etruria "Welcome," and dinners have also been provided for nursing and expectant mothers.(2) It has been found that there are a number of mothers who, through lack of proper nourishment, cannot nurse their babies for more than three months.

The Etruria and Burslem "Welcomes" were visited in the earlier part of the year by Dr. Lilian Wilson, of the Board of Education, and subsequently by Dr. Janet Claypon, of the Local Government Board, both of whom expressed great interest and approval.

No grant has been applied for from the Board of Education in connection with any of these "schools," the reason being that it is thought the minimum length of time required to be devoted to each address or "talk" in order that the conditions for gaining grant may be fulfilled is too long considering the class of mothers to be dealt with. At present these "talks" are each of a quarter of an hour's duration, whereas a duration of forty minutes is required in order to qualify for grant.

These grants are awarded under the Regulation for Technical Schools.

With regard to the question of affording instruction to girls and young women who will be the mothers of the future, such instruction is now given generally in all the Public Elementary Schools of the Borough.

Instruction to girls who have already left school by means of continuation classes is given in one instance only, though it has formed the subject of lectures given from time to time in connection with girls' clubs established by voluntary agencies and I am informed by Miss Grove, Lady Superintendent of the Etruria "Welcome," that she is prepared to undertake this work in connection with that institution.

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(2) It is worthy of note that the *educational* aspect of these dinners is considered an important feature. Mrs. Wedgwood writes, in her annual report :—"Miss Grove considers the dinners a very important feature, and worth making a struggle for, not only because of their direct effect on the health of the mother and baby, but also for their educational value in showing the mothers what can be done at a very small cost, and the value to health of a good and wholesome meal."

Miss Grove also informs me that the work of these "Welcomes" could be gradually extended to include medical supervision and treatment of children under school age, but before such extention of work can be undertaken, the appointment of a whole time Lady Medical Officer to supervise the work would be essential. Local Educational Authorities have no power to appoint an official for this purpose though Local Sanitary Authorities have.

If such an appointment were made it would be a comparatively simple matter for some arrangement to be arrived at between the two Committees for the use of the school clinic at certain times in connection with this work.

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